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(57) Abstract <p>Compositions and methods for the therapy and diagnosis of cancer, such as ovarian cancer, are disclosed. Compositions may comprise one or more ovarian carcinoma proteins, immunogenic portions thereof, polynucleotides that encode such portions or antibodies or immune system cells specific for such proteins. Such compositions may be used, for example, for the prevention and treatment of diseases such as ovarian cancer. Methods are further provided for identifying tumor antigens that are secreted from ovarian carcinomas and/or other tumors. Polypeptides and polynucleotides as provided herein may further be used for the diagnosis and monitoring of ovarian cancer.</p>			

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COMPOSITIONS AND METHODS FOR THERAPY AND DIAGNOSIS OF OVARIAN CANCER

TECHNICAL FIELD

The present invention relates generally to ovarian cancer therapy. The invention is more specifically related to polypeptides comprising at least a portion of an ovarian carcinoma protein, and to polynucleotides encoding such polypeptides, as well as antibodies and immune system cells that specifically recognize such polypeptides. Such polypeptides, polynucleotides, antibodies and cells may be used in vaccines and pharmaceutical compositions for treatment of ovarian cancer.

10 BACKGROUND OF THE INVENTION

Ovarian cancer is a significant health problem for women in the United States and throughout the world. Although advances have been made in detection and therapy of this cancer, no vaccine or other universally successful method for prevention or treatment is currently available. Management of the disease currently relies on a combination of early diagnosis and aggressive treatment, which may include one or more of a variety of treatments such as surgery, radiotherapy, chemotherapy and hormone therapy. The course of treatment for a particular cancer is often selected based on a variety of prognostic parameters, including an analysis of specific tumor markers. However, the use of established markers often leads to a result that is difficult to interpret, and high mortality continues to be observed in many cancer patients.

Immunotherapies have the potential to substantially improve cancer treatment and survival. Such therapies may involve the generation or enhancement of an immune response to an ovarian carcinoma antigen. However, to date, relatively few ovarian carcinoma antigens are known and the generation of an immune response against such antigens has not been shown to be therapeutically beneficial.

Accordingly, there is a need in the art for improved methods for identifying ovarian tumor antigens and for using such antigens in the therapy of ovarian cancer. The present invention fulfills these needs and further provides other related advantages.

SUMMARY OF THE INVENTION

Briefly stated, this invention provides compositions and methods for the therapy of cancer, such as ovarian cancer. In one aspect, the present invention provides polypeptides comprising an immunogenic portion of an ovarian carcinoma protein, or a
5 variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with ovarian carcinoma protein-specific antisera is not substantially diminished. Within certain embodiments, the ovarian carcinoma protein comprises a sequence that is encoded by a polynucleotide sequence selected from the group consisting of SEQ ID NOs:1-81, 313-331, 359, 366,
10 379, 385-387, 391 and complements of such polynucleotides.

The present invention further provides polynucleotides that encode a polypeptide as described above or a portion thereof, expression vectors comprising such polynucleotides and host cells transformed or transfected with such expression vectors.

Within other aspects, the present invention provides pharmaceutical
15 compositions and vaccines. Pharmaceutical compositions may comprise a physiologically acceptable carrier or excipient in combination with one or more of: (i) a polypeptide comprising an immunogenic portion of an ovarian carcinoma protein, or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with ovarian carcinoma protein-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein
20 comprises an amino acid sequence encoded by a polynucleotide that comprises a sequence recited in any one of SEQ ID NOs:1-81, 313-331, 359, 366, 379, 385-387 or 391; (ii) a polynucleotide encoding such a polypeptide; (iii) an antibody that specifically binds to such a polypeptide; (iv) an antigen-presenting cell that expresses such a polypeptide and/or (v) a T cell that specifically reacts with such a polypeptide.
25 Vaccines may comprise a non-specific immune response enhancer in combination with one or more of: (i) a polypeptide comprising an immunogenic portion of an ovarian carcinoma protein; or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with
30 ovarian carcinoma protein-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence encoded by a

polynucleotide that comprises a sequence recited in any one of SEQ ID NOs:1-81, 313-331, 359, 366, 379, 385-387 or 391; (ii) a polynucleotide encoding such a polypeptide; (iii) an anti-idiotypic antibody that is specifically bound by an antibody that specifically binds to such a polypeptide; (iv) an antigen-presenting cell that expresses such a polypeptide and/or (v) a T cell that specifically reacts with such a polypeptide.

The present invention further provides, in other aspects, fusion proteins that comprise at least one polypeptide as described above, as well as polynucleotides encoding such fusion proteins.

Within related aspects, pharmaceutical compositions comprising a fusion protein or polynucleotide encoding a fusion protein in combination with a physiologically acceptable carrier are provided.

Vaccines are further provided, within other aspects, comprising a fusion protein or polynucleotide encoding a fusion protein in combination with a non-specific immune response enhancer.

Within further aspects, the present invention provides methods for inhibiting the development of a cancer in a patient, comprising administering to a patient a pharmaceutical composition or vaccine as recited above.

The present invention further provides, within other aspects, methods for stimulating and/or expanding T cells, comprising contacting T cells with (a) a polypeptide comprising an immunogenic portion of an ovarian carcinoma protein, or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with ovarian carcinoma protein-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence encoded by a polynucleotide that comprises a sequence recited in any one of SEQ ID NOs:1-387 or 391; (b) a polynucleotide encoding such a polypeptide and/or (c) an antigen presenting cell that expresses such a polypeptide under conditions and for a time sufficient to permit the stimulation and/or expansion of T cells. Such polypeptide, polynucleotide and/or antigen presenting cell(s) may be present within a pharmaceutical composition or vaccine, for use in stimulating and/or expanding T cells in a mammal.

Within other aspects, the present invention provides methods for inhibiting the development of ovarian cancer in a patient, comprising administering to a patient T cells prepared as described above.

Within further aspects, the present invention provides methods for
5 inhibiting the development of ovarian cancer in a patient, comprising the steps of: (a) incubating CD4⁺ and/or CD8⁺ T cells isolated from a patient with one or more of: (i) a polypeptide comprising an immunogenic portion of an ovarian carcinoma protein, or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with ovarian carcinoma protein-
10 specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence encoded by a polynucleotide that comprises a sequence recited in any one of SEQ ID NOs: 1-387 or 391; (ii) a polynucleotide encoding such a polypeptide; or (iii) an antigen-presenting cell that expresses such a polypeptide; such that T cells proliferate; and (b) administering to the patient an
15 effective amount of the proliferated T cells, and thereby inhibiting the development of ovarian cancer in the patient. The proliferated cells may be cloned prior to administration to the patient.

The present invention also provides, within other aspects, methods for identifying secreted tumor antigens. Such methods comprise the steps of: (a)
20 implanting tumor cells in an immunodeficient mammal; (b) obtaining serum from the immunodeficient mammal after a time sufficient to permit secretion of tumor antigens into the serum; (c) immunizing an immunocompetent mammal with the serum; (d) obtaining antiserum from the immunocompetent mammal; and (e) screening a tumor expression library with the antiserum, and therefrom identifying a secreted tumor
25 antigen. A preferred method for identifying a secreted ovarian carcinoma antigen comprises the steps of: (a) implanting ovarian carcinoma cells in a SCID mouse; (b) obtaining serum from the SCID mouse after a time sufficient to permit secretion of ovarian carcinoma antigens into the serum; (c) immunizing an immunocompetent mouse with the serum; (d) obtaining antiserum from the immunocompetent mouse; and
30 (e) screening an ovarian carcinoma expression library with the antiserum, and therefrom identifying a secreted ovarian carcinoma antigen.

These and other aspects of the present invention will become apparent upon reference to the following detailed description and attached drawings. All references disclosed herein are hereby incorporated by reference in their entirety as if each was incorporated individually.

5 BRIEF DESCRIPTION OF THE DRAWINGS

Figures 1A-1S (SEQ ID NOs:1-71) depict partial sequences of polynucleotides encoding representative secreted ovarian carcinoma antigens.

Figures 2A-2C depict full insert sequences for three of the clones of Figure 1. Figure 2A shows the sequence designated O7E (11731; SEQ ID NO:72),
10 Figure 2B shows the sequence designated O9E (11785; SEQ ID NO:73) and Figure 2C shows the sequence designated O8E (13695; SEQ ID NO:74).

Figure 3 presents results of microarray expression analysis of the ovarian carcinoma sequence designated O8E.

Figure 4 presents a partial sequence of a polynucleotide (designated 3g;
15 SEQ ID NO:75) encoding an ovarian carcinoma sequence that is a splice fusion between the human T-cell leukemia virus type I oncoprotein TAX and osteonectin.

Figure 5 presents the ovarian carcinoma polynucleotide designated 3f (SEQ ID NO:76).

Figure 6 presents the ovarian carcinoma polynucleotide designated 6b
20 (SEQ ID NO:77).

Figures 7A and 7B present the ovarian carcinoma polynucleotides designated 8e (SEQ ID NO:78) and 8h (SEQ ID NO:79).

Figure 8 presents the ovarian carcinoma polynucleotide designated 12c (SEQ ID NO:80).

Figure 9 presents the ovarian carcinoma polynucleotide designated 12h
25 (SEQ ID NO:81).

Figure 10 depicts results of microarray expression analysis of the ovarian carcinoma sequence designated 3f.

Figure 11 depicts results of microarray expression analysis of the ovarian
30 carcinoma sequence designated 6b.

Figure 12 depicts results of microarray expression analysis of the ovarian carcinoma sequence designated 8e.

Figure 13 depicts results of microarray expression analysis of the ovarian carcinoma sequence designated 12c.

5 Figure 14 depicts results of microarray expression analysis of the ovarian carcinoma sequence designated 12h.

Figures 15A-15EEE depict partial sequences of additional polynucleotides encoding representative secreted ovarian carcinoma antigens (SEQ ID NOs:82-310).

10 Figure 16 is a diagram illustrating the location of various partial O8E sequences within the full length sequence.

DETAILED DESCRIPTION OF THE INVENTION

As noted above, the present invention is generally directed to compositions and methods for the therapy of cancer, such as ovarian cancer. The
15 compositions described herein may include immunogenic polypeptides, polynucleotides encoding such polypeptides, binding agents such as antibodies that bind to a polypeptide, antigen presenting cells (APCs) and/or immune system cells (*e.g.*, T cells).

Polypeptides of the present invention generally comprise at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof. Certain
20 ovarian carcinoma proteins have been identified using an immunoassay technique, and are referred to herein as ovarian carcinoma antigens. An "ovarian carcinoma antigen" is a protein that is expressed by ovarian tumor cells (preferably human cells) at a level that is at least two fold higher than the level in normal ovarian cells. Certain ovarian carcinoma antigens react detectably (within an immunoassay, such as an ELISA or
25 Western blot) with antisera generated against serum from an immunodeficient animal implanted with a human ovarian tumor. Such ovarian carcinoma antigens are shed or secreted from an ovarian tumor into the sera of the immunodeficient animal. Accordingly, certain ovarian carcinoma antigens provided herein are secreted antigens. Certain nucleic acid sequences of the subject invention generally comprise a DNA or

RNA sequence that encodes all or a portion of such a polypeptide, or that is complementary to such a sequence.

The present invention further provides ovarian carcinoma sequences that are identified using techniques to evaluate altered expression within an ovarian tumor.

5 Such sequences may be polynucleotide or protein sequences. Ovarian carcinoma sequences are generally expressed in an ovarian tumor at a level that is at least two fold, and preferably at least five fold, greater than the level of expression in normal ovarian tissue, as determined using a representative assay provided herein. Certain partial ovarian carcinoma polynucleotide sequences are presented herein. Proteins encoded by

10 genes comprising such polynucleotide sequences (or complements thereof) are also considered ovarian carcinoma proteins.

Antibodies are generally immune system proteins, or antigen-binding fragments thereof, that are capable of binding to at least a portion of an ovarian carcinoma polypeptide as described herein. T cells that may be employed within the

15 compositions provided herein are generally T cells (*e.g.*, CD4⁺ and/or CD8⁺) that are specific for such a polypeptide. Certain methods described herein further employ antigen-presenting cells (such as dendritic cells or macrophages) that express an ovarian carcinoma polypeptide as provided herein.

20 OVARIAN CARCINOMA POLYNUCLEOTIDES

Any polynucleotide that encodes an ovarian carcinoma protein or a portion or other variant thereof as described herein is encompassed by the present invention. Preferred polynucleotides comprise at least 15 consecutive nucleotides, preferably at least 30 consecutive nucleotides, and more preferably at least 45

25 consecutive nucleotides, that encode a portion of an ovarian carcinoma protein. More preferably, a polynucleotide encodes an immunogenic portion of an ovarian carcinoma protein, such as an ovarian carcinoma antigen. Polynucleotides complementary to any such sequences are also encompassed by the present invention. Polynucleotides may be single-stranded (coding or antisense) or double-stranded, and may be DNA (genomic,

30 cDNA or synthetic) or RNA molecules. Additional coding or non-coding sequences may, but need not, be present within a polynucleotide of the present invention, and a

polynucleotide may, but need not, be linked to other molecules and/or support materials.

Polynucleotides may comprise a native sequence (*i.e.*, an endogenous sequence that encodes an ovarian carcinoma protein or a portion thereof) or may
5 comprise a variant of such a sequence. Polynucleotide variants may contain one or more substitutions, additions, deletions and/or insertions such that the immunogenicity of the encoded polypeptide is not diminished, relative to a native ovarian carcinoma protein. The effect on the immunogenicity of the encoded polypeptide may generally be assessed as described herein. Variants preferably exhibit at least about 70% identity,
10 more preferably at least about 80% identity and most preferably at least about 90% identity to a polynucleotide sequence that encodes a native ovarian carcinoma protein or a portion thereof.

The percent identity for two polynucleotide or polypeptide sequences may be readily determined by comparing sequences using computer algorithms well
15 known to those of ordinary skill in the art, such as Megalign, using default parameters. Comparisons between two sequences are typically performed by comparing the sequences over a comparison window to identify and compare local regions of sequence similarity. A "comparison window" as used herein, refers to a segment of at least about 20 contiguous positions, usually 30 to about 75, or 40 to about 50, in which a sequence
20 may be compared to a reference sequence of the same number of contiguous positions after the two sequences are optimally aligned. Optimal alignment of sequences for comparison may be conducted, for example, using the Megalign program in the Lasergene suite of bioinformatics software (DNASTAR, Inc., Madison, WI), using default parameters. Preferably, the percentage of sequence identity is determined by
25 comparing two optimally aligned sequences over a window of comparison of at least 20 positions, wherein the portion of the polynucleotide or polypeptide sequence in the window may comprise additions or deletions (*i.e.*, gaps) of 20 % or less, usually 5 to 15 %, or 10 to 12%, relative to the reference sequence (which does not contain additions or deletions). The percent identity may be calculated by determining the number of
30 positions at which the identical nucleic acid bases or amino acid residue occurs in both sequences to yield the number of matched positions, dividing the number of matched

positions by the total number of positions in the reference sequence (*i.e.*, the window size) and multiplying the results by 100 to yield the percentage of sequence identity.

Variants may also, or alternatively, be substantially homologous to a native gene, or a portion or complement thereof. Such polynucleotide variants are
5 capable of hybridizing under moderately stringent conditions to a naturally occurring DNA sequence encoding a native ovarian carcinoma protein (or a complementary sequence). Suitable moderately stringent conditions include prewashing in a solution of 5 X SSC, 0.5% SDS, 1.0 mM EDTA (pH 8.0); hybridizing at 50°C-65°C, 5 X SSC, overnight; followed by washing twice at 65°C for 20 minutes with each of 2X, 0.5X and
10 0.2X SSC containing 0.1% SDS.

It will be appreciated by those of ordinary skill in the art that, as a result of the degeneracy of the genetic code, there are many nucleotide sequences that encode a polypeptide as described herein. Some of these polynucleotides bear minimal homology to the nucleotide sequence of any native gene. Nonetheless, polynucleotides
15 that vary due to differences in codon usage are specifically contemplated by the present invention. Further, alleles of the genes comprising the polynucleotide sequences provided herein are within the scope of the present invention. Alleles are endogenous genes that are altered as a result of one or more mutations, such as deletions, additions and/or substitutions of nucleotides. The resulting mRNA and protein may, but need
20 not, have an altered structure or function. Alleles may be identified using standard techniques (such as hybridization, amplification and/or database sequence comparison).

Polynucleotides may be prepared using any of a variety of techniques. For example, an ovarian carcinoma polynucleotide may be identified, as described in more detail below, by screening a late passage ovarian tumor expression library with
25 antisera generated against sera of immunocompetent mice after injection of such mice with sera from SCID mice implanted with late passage ovarian tumors. Ovarian carcinoma polynucleotides may also be identified using any of a variety of techniques designed to evaluate differential gene expression. Alternatively, polynucleotides may be amplified from cDNA prepared from ovarian tumor cells. Such polynucleotides may
30 be amplified via polymerase chain reaction (PCR). For this approach, sequence-specific

primers may be designed based on the sequences provided herein, and may be purchased or synthesized.

An amplified portion may be used to isolate a full length gene from a suitable library (e.g., an ovarian carcinoma cDNA library) using well known techniques.

5 Within such techniques, a library (cDNA or genomic) is screened using one or more polynucleotide probes or primers suitable for amplification. Preferably, a library is size-selected to include larger molecules. Random primed libraries may also be preferred for identifying 5' and upstream regions of genes. Genomic libraries are preferred for obtaining introns and extending 5' sequences.

10 For hybridization techniques, a partial sequence may be labeled (e.g., by nick-translation or end-labeling with ³²P) using well known techniques. A bacterial or bacteriophage library is then screened by hybridizing filters containing denatured bacterial colonies (or lawns containing phage plaques) with the labeled probe (see Sambrook et al., *Molecular Cloning: A Laboratory Manual*, Cold Spring Harbor
15 Laboratories, Cold Spring Harbor, NY, 1989). Hybridizing colonies or plaques are selected and expanded, and the DNA is isolated for further analysis. cDNA clones may be analyzed to determine the amount of additional sequence by, for example, PCR using a primer from the partial sequence and a primer from the vector. Restriction maps and partial sequences may be generated to identify one or more overlapping clones. The
20 complete sequence may then be determined using standard techniques, which may involve generating a series of deletion clones. The resulting overlapping sequences are then assembled into a single contiguous sequence. A full length cDNA molecule can be generated by ligating suitable fragments, using well known techniques.

Alternatively, there are numerous amplification techniques for obtaining
25 a full length coding sequence from a partial cDNA sequence. Within such techniques, amplification is generally performed via PCR. Any of a variety of commercially available kits may be used to perform the amplification step. Primers may be designed using, for example, software well known in the art. Primers are preferably 22-30 nucleotides in length, have a GC content of at least 50% and anneal to the target
30 sequence at temperatures of about 68°C to 72°C. The amplified region may be

sequenced as described above, and overlapping sequences assembled into a contiguous sequence.

One such amplification technique is inverse PCR (*see* Triglia et al., *Nucl. Acids Res.* 16:8186, 1988), which uses restriction enzymes to generate a fragment in the
5 known region of the gene. The fragment is then circularized by intramolecular ligation and used as a template for PCR with divergent primers derived from the known region. Within an alternative approach, sequences adjacent to a partial sequence may be retrieved by amplification with a primer to a linker sequence and a primer specific to a known region. The amplified sequences are typically subjected to a second round of
10 amplification with the same linker primer and a second primer specific to the known region. A variation on this procedure, which employs two primers that initiate extension in opposite directions from the known sequence, is described in WO 96/38591. Additional techniques include capture PCR (Lagerstrom et al., *PCR Methods Applic.* 1:111-19, 1991) and walking PCR (Parker et al., *Nucl. Acids. Res.* 19:3055-60,
15 1991). Other methods employing amplification may also be employed to obtain a full length cDNA sequence.

In certain instances, it is possible to obtain a full length cDNA sequence by analysis of sequences provided in an expressed sequence tag (EST) database, such as that available from GenBank. Searches for overlapping ESTs may generally be
20 performed using well known programs (*e.g.*, NCBI BLAST searches), and such ESTs may be used to generate a contiguous full length sequence.

Certain nucleic acid sequences of cDNA molecules encoding portions of ovarian carcinoma antigens are provided in Figures 1A-1S (SEQ ID NOS:1 to 71) and Figures 15A to 15EEE (SEQ ID NOS:82 to 310). The sequences provided in Figures
25 1A-1S appear to be novel. For sequences in Figures 15A-15EEE, database searches revealed matches having substantial identity. These polynucleotides were isolated by serological screening of an ovarian tumor cDNA expression library, using a technique designed to identify secreted tumor antigens. Briefly, a late passage ovarian tumor expression library was prepared from a SCID-derived human ovarian tumor (OV9334)
30 in the vector λ -screen (Novagen). The sera used for screening were obtained by injecting immunocompetent mice with sera from SCID mice implanted with one late

passage ovarian tumors. This technique permits the identification of cDNA molecules that encode immunogenic portions of secreted tumor antigens.

The polynucleotides recited herein, as well as full length polynucleotides comprising such sequences, other portions of such full length polynucleotides, and sequences complementary to all or a portion of such full length molecules, are specifically encompassed by the present invention. It will be apparent to those of ordinary skill in the art that this technique can also be applied to the identification of antigens that are secreted from other types of tumors.

Other nucleic acid sequences of cDNA molecules encoding portions of ovarian carcinoma proteins are provided in Figures 4-9 (SEQ ID NOs:75-81), as well as SEQ ID NOs:313-384. These sequences were identified by screening a microarray of cDNAs for tumor-associated expression (*i.e.*, expression that is at least five fold greater in an ovarian tumor than in normal ovarian tissue, as determined using a representative assay provided herein). Such screens were performed using a Synteni microarray (Palo Alto, CA) according to the manufacturer's instructions (and essentially as described by Schena et al., *Proc. Natl. Acad. Sci. USA* 93:10614-10619, 1996 and Heller et al., *Proc. Natl. Acad. Sci. USA* 94:2150-2155, 1997). SEQ ID NOs:311 and 391 provide full length sequences incorporating certain of these nucleic acid sequences.

Any of a variety of well known techniques may be used to evaluate tumor-associated expression of a cDNA. For example, hybridization techniques using labeled polynucleotide probes may be employed. Alternatively, or in addition, amplification techniques such as real-time PCR may be used (*see* Gibson et al., *Genome Research* 6:995-1001, 1996; Heid et al., *Genome Research* 6:986-994, 1996). Real-time PCR is a technique that evaluates the level of PCR product accumulation during amplification. This technique permits quantitative evaluation of mRNA levels in multiple samples. Briefly, mRNA is extracted from tumor and normal tissue and cDNA is prepared using standard techniques. Real-time PCR may be performed, for example, using a Perkin Elmer/Applied Biosystems (Foster City, CA) 7700 Prism instrument. Matching primers and fluorescent probes may be designed for genes of interest using, for example, the primer express program provided by Perkin Elmer/Applied Biosystems (Foster City, CA). Optimal concentrations of primers and probes may be initially

determined by those of ordinary skill in the art, and control (e.g., β -actin) primers and probes may be obtained commercially from, for example, Perkin Elmer/Applied Biosystems (Foster City, CA). To quantitate the amount of specific RNA in a sample, a standard curve is generated alongside using a plasmid containing the gene of interest.

5 Standard curves may be generated using the Ct values determined in the real-time PCR, which are related to the initial cDNA concentration used in the assay. Standard dilutions ranging from 10^{-10} to 10^{-6} copies of the gene of interest are generally sufficient. In addition, a standard curve is generated for the control sequence. This permits standardization of initial RNA content of a tissue sample to the amount of control for

10 comparison purposes.

Polynucleotide variants may generally be prepared by any method known in the art, including chemical synthesis by, for example, solid phase phosphoramidite chemical synthesis. Modifications in a polynucleotide sequence may also be introduced using standard mutagenesis techniques, such as oligonucleotide-

15 directed site-specific mutagenesis (see Adelman et al., *DNA* 2:183, 1983). Alternatively, RNA molecules may be generated by *in vitro* or *in vivo* transcription of DNA sequences encoding an ovarian carcinoma antigen, or portion thereof, provided that the DNA is incorporated into a vector with a suitable RNA polymerase promoter (such as T7 or SP6). Certain portions may be used to prepare an encoded polypeptide,

20 as described herein. In addition, or alternatively, a portion may be administered to a patient such that the encoded polypeptide is generated *in vivo*.

A portion of a sequence complementary to a coding sequence (i.e., an antisense polynucleotide) may also be used as a probe or to modulate gene expression. cDNA constructs that can be transcribed into antisense RNA may also be introduced

25 into cells or tissues to facilitate the production of antisense RNA. An antisense polynucleotide may be used, as described herein, to inhibit expression of an ovarian carcinoma protein. Antisense technology can be used to control gene expression through triple-helix formation, which compromises the ability of the double helix to open sufficiently for the binding of polymerases, transcription factors or regulatory

30 molecules (see Gee et al., In Huber and Carr, *Molecular and Immunologic Approaches*, Futura Publishing Co. (Mt. Kisco, NY; 1994). Alternatively, an antisense molecule

may be designed to hybridize with a control region of a gene (e.g., promoter, enhancer or transcription initiation site), and block transcription of the gene; or to block translation by inhibiting binding of a transcript to ribosomes.

Any polynucleotide may be further modified to increase stability *in vivo*.

5 Possible modifications include, but are not limited to, the addition of flanking sequences at the 5' and/or 3' ends; the use of phosphorothioate or 2' O-methyl rather than phosphodiesterase linkages in the backbone; and/or the inclusion of nontraditional bases such as inosine, queosine and wybutosine, as well as acetyl-, methyl-, thio- and other modified forms of adenine, cytidine, guanine, thymine and uridine.

10 Nucleotide sequences as described herein may be joined to a variety of other nucleotide sequences using established recombinant DNA techniques. For example, a polynucleotide may be cloned into any of a variety of cloning vectors, including plasmids, phagemids, lambda phage derivatives and cosmids. Vectors of particular interest include expression vectors, replication vectors, probe generation
15 vectors and sequencing vectors. In general, a vector will contain an origin of replication functional in at least one organism, convenient restriction endonuclease sites and one or more selectable markers. Other elements will depend upon the desired use, and will be apparent to those of ordinary skill in the art.

Within certain embodiments, polynucleotides may be formulated so as to
20 permit entry into a cell of a mammal, and expression therein. Such formulations are particularly useful for therapeutic purposes, as described below. Those of ordinary skill in the art will appreciate that there are many ways to achieve expression of a polynucleotide in a target cell, and any suitable method may be employed. For example, a polynucleotide may be incorporated into a viral vector such as, but not
25 limited to, adenovirus, adeno-associated virus, retrovirus, or vaccinia or other pox virus (e.g., avian pox virus). Techniques for incorporating DNA into such vectors are well known to those of ordinary skill in the art. A retroviral vector may additionally transfer or incorporate a gene for a selectable marker (to aid in the identification or selection of transduced cells) and/or a targeting moiety, such as a gene that encodes a ligand for a
30 receptor on a specific target cell, to render the vector target specific. Targeting may

also be accomplished using an antibody, by methods known to those of ordinary skill in the art.

Other formulations for therapeutic purposes include colloidal dispersion systems, such as macromolecule complexes, nanocapsules, microspheres, beads, and lipid-based systems including oil-in-water emulsions, micelles, mixed micelles, and liposomes. A preferred colloidal system for use as a delivery vehicle *in vitro* and *in vivo* is a liposome (*i.e.*, an artificial membrane vesicle). The preparation and use of such systems is well known in the art.

10 OVARIAN CARCINOMA POLYPEPTIDES

Within the context of the present invention, polypeptides may comprise at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof, as described herein. As noted above, certain ovarian carcinoma proteins are ovarian carcinoma antigens that are expressed by ovarian tumor cells and react detectably within an immunoassay (such as an ELISA) with antisera generated against serum from an immunodeficient animal implanted with an ovarian tumor. Other ovarian carcinoma proteins are encoded by ovarian carcinoma polynucleotides recited herein. Polypeptides as described herein may be of any length. Additional sequences derived from the native protein and/or heterologous sequences may be present, and such sequences may (but need not) possess further immunogenic or antigenic properties.

An "immunogenic portion," as used herein is a portion of an antigen that is recognized (*i.e.*, specifically bound) by a B-cell and/or T-cell surface antigen receptor. Such immunogenic portions generally comprise at least 5 amino acid residues, more preferably at least 10, and still more preferably at least 20 amino acid residues of an ovarian carcinoma protein or a variant thereof. Preferred immunogenic portions are encoded by cDNA molecules isolated as described herein. Further immunogenic portions may generally be identified using well known techniques, such as those summarized in Paul, *Fundamental Immunology*, 3rd ed., 243-247 (Raven Press, 1993) and references cited therein. Such techniques include screening polypeptides for the ability to react with ovarian carcinoma protein-specific antibodies, antisera and/or T-cell lines or clones. As used herein, antisera and antibodies are "ovarian carcinoma

protein-specific" if they specifically bind to an ovarian carcinoma protein (*i.e.*, they react with the ovarian carcinoma protein in an ELISA or other immunoassay, and do not react detectably with unrelated proteins). Such antisera, antibodies and T cells may be prepared as described herein, and using well known techniques. An immunogenic
5 portion of a native ovarian carcinoma protein is a portion that reacts with such antisera, antibodies and/or T-cells at a level that is not substantially less than the reactivity of the full length polypeptide (*e.g.*, in an ELISA and/or T-cell reactivity assay). Such immunogenic portions may react within such assays at a level that is similar to or greater than the reactivity of the full length protein. Such screens may generally be
10 performed using methods well known to those of ordinary skill in the art, such as those described in Harlow and Lane, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory, 1988. For example, a polypeptide may be immobilized on a solid support and contacted with patient sera to allow binding of antibodies within the sera to the immobilized polypeptide. Unbound sera may then be removed and bound antibodies
15 detected using, for example, ¹²⁵I-labeled Protein A.

As noted above, a composition may comprise a variant of a native ovarian carcinoma protein. A polypeptide "variant," as used herein, is a polypeptide that differs from a native ovarian carcinoma protein in one or more substitutions, deletions, additions and/or insertions, such that the immunogenicity of the polypeptide
20 is not substantially diminished. In other words, the ability of a variant to react with ovarian carcinoma protein-specific antisera may be enhanced or unchanged, relative to the native ovarian carcinoma protein, or may be diminished by less than 50%, and preferably less than 20%, relative to the native ovarian carcinoma protein. Such variants may generally be identified by modifying one of the above polypeptide
25 sequences and evaluating the reactivity of the modified polypeptide with ovarian carcinoma protein-specific antibodies or antisera as described herein. Preferred variants include those in which one or more portions, such as an N-terminal leader sequence or transmembrane domain, have been removed. Other preferred variants include variants in which a small portion (*e.g.*, 1-30 amino acids, preferably 5-15 amino acids) has been
30 removed from the N- and/or C-terminal of the mature protein.

Polypeptide variants preferably exhibit at least about 70%, more preferably at least about 90% and most preferably at least about 95% identity to the native polypeptide. Preferably, a variant contains conservative substitutions. A "conservative substitution" is one in which an amino acid is substituted for another amino acid that has similar properties, such that one skilled in the art of peptide chemistry would expect the secondary structure and hydrophobic nature of the polypeptide to be substantially unchanged. Amino acid substitutions may generally be made on the basis of similarity in polarity, charge, solubility, hydrophobicity, hydrophilicity and/or the amphipathic nature of the residues. For example, negatively charged amino acids include aspartic acid and glutamic acid; positively charged amino acids include lysine and arginine; and amino acids with uncharged polar head groups having similar hydrophilicity values include leucine, isoleucine and valine; glycine and alanine; asparagine and glutamine; and serine, threonine, phenylalanine and tyrosine. Other groups of amino acids that may represent conservative changes include: (1) ala, pro, gly, glu, asp, gln, asn, ser, thr; (2) cys, ser, tyr, thr; (3) val, ile, leu, met, ala, phe; (4) lys, arg, his; and (5) phe, tyr, trp, his. A variant may also, or alternatively, contain nonconservative changes. Variants may also (or alternatively) be modified by, for example, the deletion or addition of amino acids that have minimal influence on the immunogenicity, secondary structure and hydrophobic nature of the polypeptide.

As noted above, polypeptides may comprise a signal (or leader) sequence at the N-terminal end of the protein which co-translationally or post-translationally directs transfer of the protein. The polypeptide may also be conjugated to a linker or other sequence for ease of synthesis, purification or identification of the polypeptide (*e.g.*, poly-His), or to enhance binding of the polypeptide to a solid support. For example, a polypeptide may be conjugated to an immunoglobulin Fc region.

Polypeptides may be prepared using any of a variety of well known techniques. Recombinant polypeptides encoded by DNA sequences as described above may be readily prepared from the DNA sequences using any of a variety of expression vectors known to those of ordinary skill in the art. Expression may be achieved in any appropriate host cell that has been transformed or transfected with an expression vector containing a DNA molecule that encodes a recombinant polypeptide. Suitable host

cells include prokaryotes, yeast and higher eukaryotic cells. Preferably, the host cells employed are *E. coli*, yeast or a mammalian cell line such as COS or CHO. Supernatants from suitable host/vector systems which secrete recombinant protein or polypeptide into culture media may be first concentrated using a commercially available
5 filter. Following concentration, the concentrate may be applied to a suitable purification matrix such as an affinity matrix or an ion exchange resin. Finally, one or more reverse phase HPLC steps can be employed to further purify a recombinant polypeptide.

Portions and other variants having fewer than about 100 amino acids, and generally fewer than about 50 amino acids, may also be generated by synthetic
10 means, using techniques well known to those of ordinary skill in the art. For example, such polypeptides may be synthesized using any of the commercially available solid-phase techniques, such as the Merrifield solid-phase synthesis method, where amino acids are sequentially added to a growing amino acid chain. See Merrifield, *J. Am. Chem. Soc.* 85:2149-2146, 1963. Equipment for automated synthesis of polypeptides is
15 commercially available from suppliers such as Applied BioSystems, Inc. (Foster City, CA), and may be operated according to the manufacturer's instructions.

Within certain specific embodiments, a polypeptide may be a fusion protein that comprises multiple polypeptides as described herein, or that comprises one
20 polypeptide as described herein and a known tumor antigen, such as an ovarian carcinoma protein or a variant of such a protein. A fusion partner may, for example, assist in providing T helper epitopes (an immunological fusion partner), preferably T helper epitopes recognized by humans, or may assist in expressing the protein (an expression enhancer) at higher yields than the native recombinant protein. Certain
25 preferred fusion partners are both immunological and expression enhancing fusion partners. Other fusion partners may be selected so as to increase the solubility of the protein or to enable the protein to be targeted to desired intracellular compartments. Still further fusion partners include affinity tags, which facilitate purification of the protein.

30 Fusion proteins may generally be prepared using standard techniques, including chemical conjugation. Preferably, a fusion protein is expressed as a

recombinant protein, allowing the production of increased levels, relative to a non-fused protein, in an expression system. Briefly, DNA sequences encoding the polypeptide components may be assembled separately, and ligated into an appropriate expression vector. The 3' end of the DNA sequence encoding one polypeptide component is
5 ligated, with or without a peptide linker, to the 5' end of a DNA sequence encoding the second polypeptide component so that the reading frames of the sequences are in phase. This permits translation into a single fusion protein that retains the biological activity of both component polypeptides.

A peptide linker sequence may be employed to separate the first and the
10 second polypeptide components by a distance sufficient to ensure that each polypeptide folds into its secondary and tertiary structures. Such a peptide linker sequence is incorporated into the fusion protein using standard techniques well known in the art. Suitable peptide linker sequences may be chosen based on the following factors: (1) their ability to adopt a flexible extended conformation; (2) their inability to adopt a
15 secondary structure that could interact with functional epitopes on the first and second polypeptides; and (3) the lack of hydrophobic or charged residues that might react with the polypeptide functional epitopes. Preferred peptide linker sequences contain Gly, Asn and Ser residues. Other near neutral amino acids, such as Thr and Ala may also be used in the linker sequence. Amino acid sequences which may be usefully employed as
20 linkers include those disclosed in Maratea et al., *Gene* 40:39-46, 1985; Murphy et al., *Proc. Natl. Acad. Sci. USA* 83:8258-8262, 1986; U.S. Patent No. 4,935,233 and U.S. Patent No. 4,751,180. The linker sequence may generally be from 1 to about 50 amino acids in length. Linker sequences are not required when the first and second polypeptides have non-essential N-terminal amino acid regions that can be used to
25 separate the functional domains and prevent steric interference.

The ligated DNA sequences are operably linked to suitable transcriptional or translational regulatory elements. The regulatory elements responsible for expression of DNA are located only 5' to the DNA sequence encoding the first polypeptides. Similarly, stop codons required to end translation and
30 transcription termination signals are only present 3' to the DNA sequence encoding the second polypeptide.

Fusion proteins are also provided that comprise a polypeptide of the present invention together with an unrelated immunogenic protein. Preferably the immunogenic protein is capable of eliciting a recall response. Examples of such proteins include tetanus, tuberculosis and hepatitis proteins (*see*, for example, Stoute
5 et al. *New Engl. J. Med.*, 336:86-91, 1997).

Within preferred embodiments, an immunological fusion partner is derived from protein D, a surface protein of the gram-negative bacterium *Haemophilus influenza B* (WO 91/18926). Preferably, a protein D derivative comprises approximately the first third of the protein (*e.g.*, the first N-terminal 100-110 amino
10 acids), and a protein D derivative may be lipidated. Within certain preferred embodiments, the first 109 residues of a Lipoprotein D fusion partner is included on the N-terminus to provide the polypeptide with additional exogenous T-cell epitopes and to increase the expression level in *E. coli* (thus functioning as an expression enhancer). The lipid tail ensures optimal presentation of the antigen to antigen present cells. Other
15 fusion partners include the non-structural protein from influenzae virus, NS1 (hemagglutinin). Typically, the N-terminal 81 amino acids are used, although different fragments that include T-helper epitopes may be used.

In another embodiment, the immunological fusion partner is the protein known as LYTA, or a portion thereof (preferably a C-terminal portion). LYTA is
20 derived from *Streptococcus pneumoniae*, which synthesizes an N-acetyl-L-alanine amidase known as amidase LYTA (encoded by the *LytA* gene; *Gene* 43:265-292, 1986). LYTA is an autolysin that specifically degrades certain bonds in the peptidoglycan backbone. The C-terminal domain of the LYTA protein is responsible for the affinity to the choline or to some choline analogues such as DEAE. This
25 property has been exploited for the development of *E. coli* C-LYTA expressing plasmids useful for expression of fusion proteins. Purification of hybrid proteins containing the C-LYTA fragment at the amino terminus has been described (*see Biotechnology* 10:795-798, 1992). Within a preferred embodiment, a repeat portion of LYTA may be incorporated into a fusion protein. A repeat portion is found in the C-
30 terminal region starting at residue 178. A particularly preferred repeat portion incorporates residues 188-305.

In general, polypeptides (including fusion proteins) and polynucleotides as described herein are isolated. An "isolated" polypeptide or polynucleotide is one that is removed from its original environment. For example, a naturally-occurring protein is isolated if it is separated from some or all of the coexisting materials in the natural system. Preferably, such polypeptides are at least about 90% pure, more preferably at least about 95% pure and most preferably at least about 99% pure. A polynucleotide is considered to be isolated if, for example, it is cloned into a vector that is not a part of the natural environment.

10 BINDING AGENTS

The present invention further provides agents, such as antibodies and antigen-binding fragments thereof, that specifically bind to an ovarian carcinoma protein. As used herein, an antibody, or antigen-binding fragment thereof, is said to "specifically bind" to an ovarian carcinoma protein if it reacts at a detectable level (within, for example, an ELISA) with an ovarian carcinoma protein, and does not react detectably with unrelated proteins under similar conditions. As used herein, "binding" refers to a noncovalent association between two separate molecules such that a "complex" is formed. The ability to bind may be evaluated by, for example, determining a binding constant for the formation of the complex. The binding constant is the value obtained when the concentration of the complex is divided by the product of the component concentrations. In general, two compounds are said to "bind," in the context of the present invention, when the binding constant for complex formation exceeds about 10^3 L/mol. The binding constant may be determined using methods well known in the art.

Binding agents may be further capable of differentiating between patients with and without a cancer, such as ovarian cancer, using the representative assays provided herein. In other words, antibodies or other binding agents that bind to an ovarian carcinoma antigen will generate a signal indicating the presence of a cancer in at least about 20% of patients with the disease, and will generate a negative signal indicating the absence of the disease in at least about 90% of individuals without the cancer. To determine whether a binding agent satisfies this requirement, biological

samples (e.g., blood, sera, leukophoresis, urine and/or tumor biopsies) from patients with and without a cancer (as determined using standard clinical tests) may be assayed as described herein for the presence of polypeptides that bind to the binding agent. It will be apparent that a statistically significant number of samples with and without the disease should be assayed. Each binding agent should satisfy the above criteria; however, those of ordinary skill in the art will recognize that binding agents may be used in combination to improve sensitivity.

Any agent that satisfies the above requirements may be a binding agent. For example, a binding agent may be a ribosome, with or without a peptide component, an RNA molecule or a polypeptide. In a preferred embodiment, a binding agent is an antibody or an antigen-binding fragment thereof. Antibodies may be prepared by any of a variety of techniques known to those of ordinary skill in the art. See, e.g., Harlow and Lane, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory, 1988. In general, antibodies can be produced by cell culture techniques, including the generation of monoclonal antibodies as described herein, or via transfection of antibody genes into suitable bacterial or mammalian cell hosts, in order to allow for the production of recombinant antibodies. In one technique, an immunogen comprising the polypeptide is initially injected into any of a wide variety of mammals (e.g., mice, rats, rabbits, sheep or goats). In this step, the polypeptides of this invention may serve as the immunogen without modification. Alternatively, particularly for relatively short polypeptides, a superior immune response may be elicited if the polypeptide is joined to a carrier protein, such as bovine serum albumin or keyhole limpet hemocyanin. The immunogen is injected into the animal host, preferably according to a predetermined schedule incorporating one or more booster immunizations, and the animals are bled periodically. Polyclonal antibodies specific for the polypeptide may then be purified from such antisera by, for example, affinity chromatography using the polypeptide coupled to a suitable solid support.

Monoclonal antibodies specific for an antigenic polypeptide of interest may be prepared, for example, using the technique of Kohler and Milstein, *Eur. J. Immunol.* 6:511-519, 1976, and improvements thereto. Briefly, these methods involve the preparation of immortal cell lines capable of producing antibodies having the

desired specificity (*i.e.*, reactivity with the polypeptide of interest). Such cell lines may be produced, for example, from spleen cells obtained from an animal immunized as described above. The spleen cells are then immortalized by, for example, fusion with a myeloma cell fusion partner, preferably one that is syngeneic with the immunized animal. A variety of fusion techniques may be employed. For example, the spleen cells and myeloma cells may be combined with a nonionic detergent for a few minutes and then plated at low density on a selective medium that supports the growth of hybrid cells, but not myeloma cells. A preferred selection technique uses HAT (hypoxanthine, aminopterin, thymidine) selection. After a sufficient time, usually about 1 to 2 weeks, colonies of hybrids are observed. Single colonies are selected and their culture supernatants tested for binding activity against the polypeptide. Hybridomas having high reactivity and specificity are preferred.

Monoclonal antibodies may be isolated from the supernatants of growing hybridoma colonies. In addition, various techniques may be employed to enhance the yield, such as injection of the hybridoma cell line into the peritoneal cavity of a suitable vertebrate host, such as a mouse. Monoclonal antibodies may then be harvested from the ascites fluid or the blood. Contaminants may be removed from the antibodies by conventional techniques, such as chromatography, gel filtration, precipitation, and extraction. The polypeptides of this invention may be used in the purification process in, for example, an affinity chromatography step.

Within certain embodiments, the use of antigen-binding fragments of antibodies may be preferred. Such fragments include Fab fragments, which may be prepared using standard techniques. Briefly, immunoglobulins may be purified from rabbit serum by affinity chromatography on Protein A bead columns (Harlow and Lane, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory, 1988) and digested by papain to yield Fab and Fc fragments. The Fab and Fc fragments may be separated by affinity chromatography on protein A bead columns.

Monoclonal antibodies of the present invention may be coupled to one or more therapeutic agents. Suitable agents in this regard include radionuclides, differentiation inducers, drugs, toxins, and derivatives thereof. Preferred radionuclides include ^{90}Y , ^{123}I , ^{125}I , ^{131}I , ^{186}Re , ^{188}Re , ^{211}At , and ^{212}Bi . Preferred drugs include

methotrexate, and pyrimidine and purine analogs. Preferred differentiation inducers include phorbol esters and butyric acid. Preferred toxins include ricin, abrin, diphtheria toxin, cholera toxin, gelonin, *Pseudomonas* exotoxin, *Shigella* toxin, and pokeweed antiviral protein.

5 A therapeutic agent may be coupled (*e.g.*, covalently bonded) to a suitable monoclonal antibody either directly or indirectly (*e.g.*, via a linker group). A direct reaction between an agent and an antibody is possible when each possesses a substituent capable of reacting with the other. For example, a nucleophilic group, such as an amino or sulfhydryl group, on one may be capable of reacting with a carbonyl-
10 containing group, such as an anhydride or an acid halide, or with an alkyl group containing a good leaving group (*e.g.*, a halide) on the other.

Alternatively, it may be desirable to couple a therapeutic agent and an antibody via a linker group. A linker group can function as a spacer to distance an antibody from an agent in order to avoid interference with binding capabilities. A
15 linker group can also serve to increase the chemical reactivity of a substituent on an agent or an antibody, and thus increase the coupling efficiency. An increase in chemical reactivity may also facilitate the use of agents, or functional groups on agents, which otherwise would not be possible.

It will be evident to those skilled in the art that a variety of bifunctional
20 or polyfunctional reagents, both homo- and hetero-functional (such as those described in the catalog of the Pierce Chemical Co., Rockford, IL), may be employed as the linker group. Coupling may be effected, for example, through amino groups, carboxyl groups, sulfhydryl groups or oxidized carbohydrate residues. There are numerous references describing such methodology, *e.g.*, U.S. Patent No. 4,671,958, to Rodwell et al.

25 Where a therapeutic agent is more potent when free from the antibody portion of the immunoconjugates of the present invention, it may be desirable to use a linker group which is cleavable during or upon internalization into a cell. A number of different cleavable linker groups have been described. The mechanisms for the intracellular release of an agent from these linker groups include cleavage by reduction
30 of a disulfide bond (*e.g.*, U.S. Patent No. 4,489,710, to Spitler), by irradiation of a photolabile bond (*e.g.*, U.S. Patent No. 4,625,014, to Senter et al.), by hydrolysis of

derivatized amino acid side chains (*e.g.*, U.S. Patent No. 4,638,045, to Kohn et al.), by serum complement-mediated hydrolysis (*e.g.*, U.S. Patent No. 4,671,958, to Rodwell et al.), and acid-catalyzed hydrolysis (*e.g.*, U.S. Patent No. 4,569,789, to Blattler et al.).

It may be desirable to couple more than one agent to an antibody. In one embodiment, multiple molecules of an agent are coupled to one antibody molecule. In another embodiment, more than one type of agent may be coupled to one antibody. Regardless of the particular embodiment, immunoconjugates with more than one agent may be prepared in a variety of ways. For example, more than one agent may be coupled directly to an antibody molecule, or linkers which provide multiple sites for attachment can be used. Alternatively, a carrier can be used.

A carrier may bear the agents in a variety of ways, including covalent bonding either directly or via a linker group. Suitable carriers include proteins such as albumins (*e.g.*, U.S. Patent No. 4,507,234, to Kato et al.), peptides and polysaccharides such as aminodextran (*e.g.*, U.S. Patent No. 4,699,784, to Shih et al.). A carrier may also bear an agent by noncovalent bonding or by encapsulation, such as within a liposome vesicle (*e.g.*, U.S. Patent Nos. 4,429,008 and 4,873,088). Carriers specific for radionuclide agents include radiohalogenated small molecules and chelating compounds. For example, U.S. Patent No. 4,735,792 discloses representative radiohalogenated small molecules and their synthesis. A radionuclide chelate may be formed from chelating compounds that include those containing nitrogen and sulfur atoms as the donor atoms for binding the metal, or metal oxide, radionuclide. For example, U.S. Patent No. 4,673,562, to Davison et al. discloses representative chelating compounds and their synthesis.

A variety of routes of administration for the antibodies and immunoconjugates may be used. Typically, administration will be intravenous, intramuscular, subcutaneous or in the bed of a resected tumor. It will be evident that the precise dose of the antibody/immunoconjugate will vary depending upon the antibody used, the antigen density on the tumor, and the rate of clearance of the antibody.

Also provided herein are anti-idiotypic antibodies that mimic an immunogenic portion of an ovarian carcinoma protein. Such antibodies may be raised against an antibody, or antigen-binding fragment thereof, that specifically binds to an

immunogenic portion of an ovarian carcinoma protein, using well known techniques. Anti-idiotypic antibodies that mimic an immunogenic portion of an ovarian carcinoma protein are those antibodies that bind to an antibody, or antigen-binding fragment thereof, that specifically binds to an immunogenic portion of an ovarian carcinoma
5 protein, as described herein.

T CELLS

Immunotherapeutic compositions may also, or alternatively, comprise T cells specific for an ovarian carcinoma protein. Such cells may generally be prepared *in*
10 *vitro* or *ex vivo*, using standard procedures. For example, T cells may be present within (or isolated from) bone marrow, peripheral blood or a fraction of bone marrow or peripheral blood of a mammal, such as a patient, using a commercially available cell separation system, such as the CEPRATE™ system, available from CellPro Inc., Bothell WA (see also U.S. Patent No. 5,240,856; U.S. Patent No. 5,215,926; WO
15 89/06280; WO 91/16116 and WO 92/07243). Alternatively, T cells may be derived from related or unrelated humans, non-human animals, cell lines or cultures.

T cells may be stimulated with an ovarian carcinoma polypeptide, polynucleotide encoding an ovarian carcinoma polypeptide and/or an antigen presenting cell (APC) that expresses such a polypeptide. Such stimulation is performed under
20 conditions and for a time sufficient to permit the generation of T cells that are specific for the polypeptide. Preferably, an ovarian carcinoma polypeptide or polynucleotide is present within a delivery vehicle, such as a microsphere, to facilitate the generation of specific T cells.

T cells are considered to be specific for an ovarian carcinoma
25 polypeptide if the T cells kill target cells coated with an ovarian carcinoma polypeptide or expressing a gene encoding such a polypeptide. T cell specificity may be evaluated using any of a variety of standard techniques. For example, within a chromium release assay or proliferation assay, a stimulation index of more than two fold increase in lysis and/or proliferation, compared to negative controls, indicates T cell specificity. Such
30 assays may be performed, for example, as described in Chen et al., *Cancer Res.* 54:1065-1070, 1994. Alternatively, detection of the proliferation of T cells may be

accomplished by a variety of known techniques. For example, T cell proliferation can be detected by measuring an increased rate of DNA synthesis (*e.g.*, by pulse-labeling cultures of T cells with tritiated thymidine and measuring the amount of tritiated thymidine incorporated into DNA). Contact with an ovarian carcinoma polypeptide (200 ng/ml - 100 µg/ml, preferably 100 ng/ml - 25 µg/ml) for 3 - 7 days should result in at least a two fold increase in proliferation of the T cells and/or contact as described above for 2-3 hours should result in activation of the T cells, as measured using standard cytokine assays in which a two fold increase in the level of cytokine release (*e.g.*, TNF or IFN-γ) is indicative of T cell activation (*see* Coligan et al., Current Protocols in Immunology, vol. 1, Wiley Interscience (Greene 1998). T cells that have been activated in response to an ovarian carcinoma polypeptide, polynucleotide or ovarian carcinoma polypeptide-expressing APC may be CD4⁺ and/or CD8⁺. Ovarian carcinoma polypeptide-specific T cells may be expanded using standard techniques. Within preferred embodiments, the T cells are derived from a patient or a related or unrelated donor and are administered to the patient following stimulation and expansion.

For therapeutic purposes, CD4⁺ or CD8⁺ T cells that proliferate in response to an ovarian carcinoma polypeptide, polynucleotide or APC can be expanded in number either *in vitro* or *in vivo*. Proliferation of such T cells *in vitro* may be accomplished in a variety of ways. For example, the T cells can be re-exposed to an ovarian carcinoma polypeptide, with or without the addition of T cell growth factors, such as interleukin-2, and/or stimulator cells that synthesize an ovarian carcinoma polypeptide. Alternatively, one or more T cells that proliferate in the presence of an ovarian carcinoma polypeptide can be expanded in number by cloning. Methods for cloning cells are well known in the art, and include limiting dilution. Following expansion, the cells may be administered back to the patient as described, for example, by Chang et al., *Crit. Rev. Oncol. Hematol.* 22:213, 1996.

PHARMACEUTICAL COMPOSITIONS AND VACCINES

Within certain aspects, polypeptides, polynucleotides, binding agents and/or immune system cells as described herein may be incorporated into

pharmaceutical compositions or vaccines. Pharmaceutical compositions comprise one or more such compounds or cells and a physiologically acceptable carrier. Vaccines may comprise one or more such compounds or cells and a non-specific immune response enhancer. A non-specific immune response enhancer may be any substance
5 that enhances an immune response to an exogenous antigen. Examples of non-specific immune response enhancers include adjuvants, biodegradable microspheres (*e.g.*, polylactic galactide) and liposomes (into which the compound is incorporated; *see e.g.*, Fullerton, U.S. Patent No. 4,235,877). Vaccine preparation is generally described in, for example, M.F. Powell and M.J. Newman, eds., "Vaccine Design (the subunit and
10 adjuvant approach)," Plenum Press (NY, 1995). Pharmaceutical compositions and vaccines within the scope of the present invention may also contain other compounds, which may be biologically active or inactive. For example, one or more immunogenic portions of other tumor antigens may be present, either incorporated into a fusion polypeptide or as a separate compound within the composition or vaccine.

15 A pharmaceutical composition or vaccine may contain DNA encoding one or more of the polypeptides as described above, such that the polypeptide is generated *in situ*. As noted above, the DNA may be present within any of a variety of delivery systems known to those of ordinary skill in the art, including nucleic acid expression systems, bacteria and viral expression systems. Appropriate nucleic acid
20 expression systems contain the necessary DNA sequences for expression in the patient (such as a suitable promoter and terminating signal). Bacterial delivery systems involve the administration of a bacterium (such as *Bacillus-Calmette-Guerrin*) that expresses an immunogenic portion of the polypeptide on its cell surface. In a preferred embodiment, the DNA may be introduced using a viral expression system (*e.g.*, vaccinia or other pox
25 virus, retrovirus, or adenovirus), which may involve the use of a non-pathogenic (defective), replication competent virus. Suitable systems are disclosed, for example, in Fisher-Hoch et al., *PNAS* 86:317-321, 1989; Flexner et al., *Ann. N.Y. Acad. Sci.* 569:86-103, 1989; Flexner et al., *Vaccine* 8:17-21, 1990; U.S. Patent Nos. 4,603,112, 4,769,330, and 5,017,487; WO 89/01973; U.S. Patent No. 4,777,127; GB 2,200,651;
30 EP 0,345,242; WO 91/02805; Berkner, *Biotechniques* 6:616-627, 1988; Rosenfeld et al., *Science* 252:431-434, 1991; Kolls et al., *PNAS* 91:215-219, 1994; Kass-Eisler et al.,

PNAS 90:11498-11502, 1993; Guzman et al., *Circulation* 88:2838-2848, 1993; and Guzman et al., *Cir. Res.* 73:1202-1207, 1993. Techniques for incorporating DNA into such expression systems are well known to those of ordinary skill in the art. The DNA may also be "naked," as described, for example, in Ulmer et al., *Science* 259:1745-1749, 5 1993 and reviewed by Cohen, *Science* 259:1691-1692, 1993. The uptake of naked DNA may be increased by coating the DNA onto biodegradable beads, which are efficiently transported into the cells.

While any suitable carrier known to those of ordinary skill in the art may be employed in the pharmaceutical compositions of this invention, the type of carrier 10 will vary depending on the mode of administration. Compositions of the present invention may be formulated for any appropriate manner of administration, including for example, topical, oral, nasal, intravenous, intracranial, intraperitoneal, subcutaneous or intramuscular administration. For parenteral administration, such as subcutaneous injection, the carrier preferably comprises water, saline, alcohol, a fat, a wax or a buffer. 15 For oral administration, any of the above carriers or a solid carrier, such as mannitol, lactose, starch, magnesium stearate, sodium saccharine, talcum, cellulose, glucose, sucrose, and magnesium carbonate, may be employed. Biodegradable microspheres (e.g., polylactate polyglycolate) may also be employed as carriers for the pharmaceutical compositions of this invention. Suitable biodegradable microspheres 20 are disclosed, for example, in U.S. Patent Nos. 4,897,268 and 5,075,109.

Such compositions may also comprise buffers (e.g., neutral buffered saline or phosphate buffered saline), carbohydrates (e.g., glucose, mannose, sucrose or dextran), mannitol, proteins, polypeptides or amino acids such as glycine, antioxidants, chelating agents such as EDTA or glutathione, adjuvants (e.g., aluminum hydroxide) 25 and/or preservatives. Alternatively, compositions of the present invention may be formulated as a lyophilizate. Compounds may also be encapsulated within liposomes using well known technology.

Any of a variety of non-specific immune response enhancers may be employed in the vaccines of this invention. For example, an adjuvant may be included. 30 Most adjuvants contain a substance designed to protect the antigen from rapid catabolism, such as aluminum hydroxide or mineral oil, and a stimulator of immune

responses, such as lipid A, *Bordetella pertussis* or *Mycobacterium tuberculosis* derived proteins. Suitable adjuvants are commercially available as, for example, Freund's Incomplete Adjuvant and Complete Adjuvant (Difco Laboratories, Detroit, MI), Merck Adjuvant 65 (Merck and Company, Inc., Rahway, NJ), alum, biodegradable
5 microspheres, monophosphoryl lipid A and quil A. Cytokines, such as GM-CSF or interleukin-2, -7, or -12, may also be used as adjuvants.

Within the vaccines provided herein, the adjuvant composition is preferably designed to induce an immune response predominantly of the Th1 type. High levels of Th1-type cytokines (*e.g.*, IFN- γ , IL-2 and IL-12) tend to favor the
10 induction of cell mediated immune responses to an administered antigen. In contrast, high levels of Th2-type cytokines (*e.g.*, IL-4, IL-5, IL-6, IL-10 and TNF- β) tend to favor the induction of humoral immune responses. Following application of a vaccine as provided herein, a patient will support an immune response that includes Th1- and Th2-type responses. Within a preferred embodiment, in which a response is
15 predominantly Th1-type, the level of Th1-type cytokines will increase to a greater extent than the level of Th2-type cytokines. The levels of these cytokines may be readily assessed using standard assays. For a review of the families of cytokines, see Mosmann and Coffman, *Ann. Rev. Immunol.* 7:145-173, 1989.

Preferred adjuvants for use in eliciting a predominantly Th1-type
20 response include, for example, a combination of monophosphoryl lipid A, preferably 3-de-O-acylated monophosphoryl lipid A (3D-MPL), together with an aluminum salt. MPL adjuvants are available from Ribi ImmunoChem Research Inc. (Hamilton, MT; *see* US Patent Nos. 4,436,727; 4,877,611; 4,866,034 and 4,912,094). Also preferred is AS-2 (SmithKline Beecham). CpG-containing oligonucleotides (in which the CpG
25 dinucleotide is unmethylated) also induce a predominantly Th1 response. Such oligonucleotides are well known and are described, for example, in WO 96/02555. Another preferred adjuvant is a saponin, preferably QS21, which may be used alone or in combination with other adjuvants. For example, an enhanced system involves the combination of a monophosphoryl lipid A and saponin derivative, such as the
30 combination of QS21 and 3D-MPL as described in WO 94/00153, or a less reactogenic composition where the QS21 is quenched with cholesterol, as described in WO

96/33739. Other preferred formulations comprises an oil-in-water emulsion and tocopherol. A particularly potent adjuvant formulation involving QS21, 3D-MPL and tocopherol in an oil-in-water emulsion is described in WO 95/17210. Any vaccine provided herein may be prepared using well known methods that result in a combination of antigen, immune response enhancer and a suitable carrier or excipient.

The compositions described herein may be administered as part of a sustained release formulation (*i.e.*, a formulation such as a capsule or sponge that effects a slow release of compound following administration). Such formulations may generally be prepared using well known technology and administered by, for example, oral, rectal or subcutaneous implantation, or by implantation at the desired target site. Sustained-release formulations may contain a polypeptide, polynucleotide or antibody dispersed in a carrier matrix and/or contained within a reservoir surrounded by a rate controlling membrane. Carriers for use within such formulations are biocompatible, and may also be biodegradable; preferably the formulation provides a relatively constant level of active component release. The amount of active compound contained within a sustained release formulation depends upon the site of implantation, the rate and expected duration of release and the nature of the condition to be treated or prevented.

Any of a variety of delivery vehicles may be employed within pharmaceutical compositions and vaccines to facilitate production of an antigen-specific immune response that targets tumor cells. Delivery vehicles include antigen presenting cells (APCs), such as dendritic cells, macrophages, B cells, monocytes and other cells that may be engineered to be efficient APCs. Such cells may, but need not, be genetically modified to increase the capacity for presenting the antigen, to improve activation and/or maintenance of the T cell response, to have anti-tumor effects *per se* and/or to be immunologically compatible with the receiver (*i.e.*, matched HLA haplotype). APCs may generally be isolated from any of a variety of biological fluids and organs, including tumor and peritumoral tissues, and may be autologous, allogeneic, syngeneic or xenogeneic cells.

Certain preferred embodiments of the present invention use dendritic cells or progenitors thereof as antigen-presenting cells. Dendritic cells are highly potent

APCs (Banchereau and Steinman, *Nature* 392:245-251, 1998) and have been shown to be effective as a physiological adjuvant for eliciting prophylactic or therapeutic antitumor immunity (see Timmerman and Levy, *Ann. Rev. Med.* 50:507-529, 1999). In general, dendritic cells may be identified based on their typical shape (stellate *in situ*,
5 with marked cytoplasmic processes (dendrites) visible *in vitro*) and based on the lack of differentiation markers of B cells (CD19 and CD20), T cells (CD3), monocytes (CD14) and natural killer cells (CD56), as determined using standard assays. Dendritic cells may, of course, be engineered to express specific cell-surface receptors or ligands that are not commonly found on dendritic cells *in vivo* or *ex vivo*, and such modified
10 dendritic cells are contemplated by the present invention. As an alternative to dendritic cells, secreted vesicles antigen-loaded dendritic cells (called exosomes) may be used within a vaccine (see Zitvogel et al., *Nature Med.* 4:594-600, 1998).

Dendritic cells and progenitors may be obtained from peripheral blood, bone marrow, tumor-infiltrating cells, peritumoral tissues-infiltrating cells, lymph
15 nodes, spleen, skin, umbilical cord blood or any other suitable tissue or fluid. For example, dendritic cells may be differentiated *ex vivo* by adding a combination of cytokines such as GM-CSF, IL-4, IL-13 and/or TNF α to cultures of monocytes harvested from peripheral blood. Alternatively, CD34 positive cells harvested from peripheral blood, umbilical cord blood or bone marrow may be differentiated into
20 dendritic cells by adding to the culture medium combinations of GM-CSF, IL-3, TNF α , CD40 ligand, LPS, flt3 ligand and/or other compound(s) that induce maturation and proliferation of dendritic cells.

Dendritic cells are conveniently categorized as "immature" and "mature" cells, which allows a simple way to discriminate between two well characterized
25 phenotypes. However, this nomenclature should not be construed to exclude all possible intermediate stages of differentiation. Immature dendritic cells are characterized as APC with a high capacity for antigen uptake and processing, which correlates with the high expression of Fc γ receptor, mannose receptor and DEC-205 marker. The mature phenotype is typically characterized by a lower expression of these
30 markers, but a high expression of cell surface molecules responsible for T cell

activation such as class I and class II MHC, adhesion molecules (*e.g.*, CD54 and CD11) and costimulatory molecules (*e.g.*, CD40, CD80 and CD86).

APCs may generally be transfected with a polynucleotide encoding a ovarian carcinoma antigen (or portion or other variant thereof) such that the antigen, or
5 an immunogenic portion thereof, is expressed on the cell surface. Such transfection may take place *ex vivo*, and a composition or vaccine comprising such transfected cells may then be used for therapeutic purposes, as described herein. Alternatively, a gene delivery vehicle that targets a dendritic or other antigen presenting cell may be administered to a patient, resulting in transfection that occurs *in vivo*. *In vivo* and *ex*
10 *vivo* transfection of dendritic cells, for example, may generally be performed using any methods known in the art, such as those described in WO 97/24447, or the gene gun approach described by Mahvi et al., *Immunology and cell Biology* 75:456-460, 1997. Antigen loading of dendritic cells may be achieved by incubating dendritic cells or progenitor cells with the polypeptide, DNA (naked or within a plasmid vector) or RNA;
15 or with antigen-expressing recombinant bacterium or viruses (*e.g.*, vaccinia, fowlpox, adenovirus or lentivirus vectors). Prior to loading, the polypeptide may be covalently conjugated to an immunological partner that provides T cell help (*e.g.*, a carrier molecule). Alternatively, a dendritic cell may be pulsed with a non-conjugated immunological partner, separately or in the presence of the polypeptide.

20

CANCER THERAPY

In further aspects of the present invention, the compositions described herein may be used for immunotherapy of cancer, such as ovarian cancer. Within such methods, pharmaceutical compositions and vaccines are typically administered to a
25 patient. As used herein, a "patient" refers to any warm-blooded animal, preferably a human. A patient may or may not be afflicted with cancer. Accordingly, the above pharmaceutical compositions and vaccines may be used to prevent the development of a cancer or to treat a patient afflicted with a cancer. Within certain preferred embodiments, a patient is afflicted with ovarian cancer. Such cancer may be diagnosed
30 using criteria generally accepted in the art, including the presence of a malignant tumor. Pharmaceutical compositions and vaccines may be administered either prior to or

following surgical removal of primary tumors and/or treatment such as administration of radiotherapy or conventional chemotherapeutic drugs.

Within certain embodiments, immunotherapy may be active immunotherapy, in which treatment relies on the *in vivo* stimulation of the endogenous host immune system to react against tumors with the administration of immune response-modifying agents (such as tumor vaccines, bacterial adjuvants and/or cytokines).

Within other embodiments, immunotherapy may be passive immunotherapy, in which treatment involves the delivery of agents with established tumor-immune reactivity (such as effector cells or antibodies) that can directly or indirectly mediate antitumor effects and does not necessarily depend on an intact host immune system. Examples of effector cells include T lymphocytes (such as CD8⁺ cytotoxic T lymphocytes and CD4⁺ T-helper tumor-infiltrating lymphocytes), killer cells (such as Natural Killer cells and lymphokine-activated killer cells), B cells and antigen-presenting cells (such as dendritic cells and macrophages) expressing a polypeptide provided herein. T cell receptors and antibody receptors specific for the polypeptides recited herein may be cloned, expressed and transferred into other vectors or effector cells for adoptive immunotherapy. The polypeptides provided herein may also be used to generate antibodies or anti-idiotypic antibodies (as described above and in U.S. Patent No. 4,918,164) for passive immunotherapy.

Effector cells may generally be obtained in sufficient quantities for adoptive immunotherapy by growth *in vitro*, as described herein. Culture conditions for expanding single antigen-specific effector cells to several billion in number with retention of antigen recognition *in vivo* are well known in the art. Such *in vitro* culture conditions typically use intermittent stimulation with antigen, often in the presence of cytokines (such as IL-2) and non-dividing feeder cells. As noted above, immunoreactive polypeptides as provided herein may be used to rapidly expand antigen-specific T cell cultures in order to generate a sufficient number of cells for immunotherapy. In particular, antigen-presenting cells, such as dendritic, macrophage or B cells, may be pulsed with immunoreactive polypeptides or transfected with one or more polynucleotides using standard techniques well known in the art. For example,

antigen-presenting cells can be transfected with a polynucleotide having a promoter appropriate for increasing expression in a recombinant virus or other expression system. Cultured effector cells for use in therapy must be able to grow and distribute widely, and to survive long term *in vivo*. Studies have shown that cultured effector cells can be
5 induced to grow *in vivo* and to survive long term in substantial numbers by repeated stimulation with antigen supplemented with IL-2 (*see*, for example, Cheever et al., *Immunological Reviews* 157:177, 1997).

Alternatively, a vector expressing a polypeptide recited herein may be introduced into stem cells taken from a patient and clonally propagated *in vitro* for
10 autologous transplant back into the same patient.

Routes and frequency of administration, as well as dosage, will vary from individual to individual, and may be readily established using standard techniques. In general, the pharmaceutical compositions and vaccines may be administered by injection (*e.g.*, intracutaneous, intramuscular, intravenous or subcutaneous), intranasally
15 (*e.g.*, by aspiration), orally or in the bed of a resected tumor. Preferably, between 1 and 10 doses may be administered over a 52 week period. Preferably, 6 doses are administered, at intervals of 1 month, and booster vaccinations may be given periodically thereafter. Alternate protocols may be appropriate for individual patients. A suitable dose is an amount of a compound that, when administered as described
20 above, is capable of promoting an anti-tumor immune response, and is at least 10-50% above the basal (*i.e.*, untreated) level. Such response can be monitored by measuring the anti-tumor antibodies in a patient or by vaccine-dependent generation of cytolytic effector cells capable of killing the patient's tumor cells *in vitro*. Such vaccines should also be capable of causing an immune response that leads to an improved clinical
25 outcome (*e.g.*, more frequent remissions, complete or partial or longer disease-free survival) in vaccinated patients as compared to non-vaccinated patients. In general, for pharmaceutical compositions and vaccines comprising one or more polypeptides, the amount of each polypeptide present in a dose ranges from about 100 μ g to 5 mg per kg of host. Suitable dose sizes will vary with the size of the patient, but will typically
30 range from about 0.1 mL to about 5 mL.

In general, an appropriate dosage and treatment regimen provides the active compound(s) in an amount sufficient to provide therapeutic and/or prophylactic benefit. Such a response can be monitored by establishing an improved clinical outcome (e.g., more frequent remissions, complete or partial, or longer disease-free survival) in treated patients as compared to non-treated patients. Increases in preexisting immune responses to an ovarian carcinoma antigen generally correlate with an improved clinical outcome. Such immune responses may generally be evaluated using standard proliferation, cytotoxicity or cytokine assays, which may be performed using samples obtained from a patient before and after treatment.

10

SCREENS FOR IDENTIFYING SECRETED OVARIAN CARCINOMA ANTIGENS

The present invention provides methods for identifying secreted tumor antigens. Within such methods, tumors are implanted into immunodeficient animals such as SCID mice and maintained for a time sufficient to permit secretion of tumor antigens into serum. In general, tumors may be implanted subcutaneously or within the gonadal fat pad of an immunodeficient animal and maintained for 1-9 months, preferably 1-4 months. Implantation may generally be performed as described in WO 97/18300. The serum containing secreted antigens is then used to prepare antisera in immunocompetent mice, using standard techniques and as described herein. Briefly, 50-100 μ L of sera (pooled from three sets of immunodeficient mice, each set bearing a different SCID-derived human ovarian tumor) may be mixed 1:1 (vol:vol) with an appropriate adjuvant, such as RIBI-MPL or MPL + TDM (Sigma Chemical Co., St. Louis, MO) and injected intraperitoneally into syngeneic immunocompetent animals at monthly intervals for a total of 5 months. Antisera from animals immunized in such a manner may be obtained by drawing blood after the third, fourth and fifth immunizations. The resulting antiserum is generally pre-cleared of *E. coli* and phage antigens and used (generally following dilution, such as 1:200) in a serological expression screen.

The library is typically an expression library containing cDNAs from one or more tumors of the type that was implanted into SCID mice. This expression library may be prepared in any suitable vector, such as λ -screen (Novagen). cDNAs that

30

encode a polypeptide that reacts with the antiserum may be identified using standard techniques, and sequenced. Such cDNA molecules may be further characterized to evaluate expression in tumor and normal tissue, and to evaluate antigen secretion in patients.

5 The methods provided herein have advantages over other methods for tumor antigen discovery. In particular, all antigens identified by such methods should be secreted or released through necrosis of the tumor cells. Such antigens may be present on the surface of tumor cells for an amount of time sufficient to permit targeting and killing by the immune system, following vaccination.

10

METHODS FOR DETECTING CANCER

In general, a cancer may be detected in a patient based on the presence of one or more ovarian carcinoma proteins and/or polynucleotides encoding such proteins in a biological sample (such as blood, sera, urine and/or tumor biopsies) obtained from
15 the patient. In other words, such proteins may be used as markers to indicate the presence or absence of a cancer such as ovarian cancer. In addition, such proteins may be useful for the detection of other cancers. The binding agents provided herein generally permit detection of the level of protein that binds to the agent in the biological sample. Polynucleotide primers and probes may be used to detect the level of mRNA
20 encoding a tumor protein, which is also indicative of the presence or absence of a cancer. In general, an ovarian carcinoma-associated sequence should be present at a level that is at least three fold higher in tumor tissue than in normal tissue

There are a variety of assay formats known to those of ordinary skill in the art for using a binding agent to detect polypeptide markers in a sample. See, e.g.,
25 Harlow and Lane, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory, 1988. In general, the presence or absence of a cancer in a patient may be determined by (a) contacting a biological sample obtained from a patient with a binding agent; (b) detecting in the sample a level of polypeptide that binds to the binding agent; and (c) comparing the level of polypeptide with a predetermined cut-off value.

30 In a preferred embodiment, the assay involves the use of binding agent immobilized on a solid support to bind to and remove the polypeptide from the

remainder of the sample. The bound polypeptide may then be detected using a detection reagent that contains a reporter group and specifically binds to the binding agent/polypeptide complex. Such detection reagents may comprise, for example, a binding agent that specifically binds to the polypeptide or an antibody or other agent that specifically binds to the binding agent, such as an anti-immunoglobulin, protein G, protein A or a lectin. Alternatively, a competitive assay may be utilized, in which a polypeptide is labeled with a reporter group and allowed to bind to the immobilized binding agent after incubation of the binding agent with the sample. The extent to which components of the sample inhibit the binding of the labeled polypeptide to the binding agent is indicative of the reactivity of the sample with the immobilized binding agent. Suitable polypeptides for use within such assays include full length ovarian carcinoma proteins and portions thereof to which the binding agent binds, as described above.

The solid support may be any material known to those of ordinary skill in the art to which the tumor protein may be attached. For example, the solid support may be a test well in a microtiter plate or a nitrocellulose or other suitable membrane. Alternatively, the support may be a bead or disc, such as glass, fiberglass, latex or a plastic material such as polystyrene or polyvinylchloride. The support may also be a magnetic particle or a fiber optic sensor, such as those disclosed, for example, in U.S. Patent No. 5,359,681. The binding agent may be immobilized on the solid support using a variety of techniques known to those of skill in the art, which are amply described in the patent and scientific literature. In the context of the present invention, the term "immobilization" refers to both noncovalent association, such as adsorption, and covalent attachment (which may be a direct linkage between the agent and functional groups on the support or may be a linkage by way of a cross-linking agent). Immobilization by adsorption to a well in a microtiter plate or to a membrane is preferred. In such cases, adsorption may be achieved by contacting the binding agent, in a suitable buffer, with the solid support for a suitable amount of time. The contact time varies with temperature, but is typically between about 1 hour and about 1 day. In general, contacting a well of a plastic microtiter plate (such as polystyrene or polyvinylchloride) with an amount of binding agent ranging from about 10 ng to about

10 μg , and preferably about 100 ng to about 1 μg , is sufficient to immobilize an adequate amount of binding agent.

Covalent attachment of binding agent to a solid support may generally be achieved by first reacting the support with a bifunctional reagent that will react with
5 both the support and a functional group, such as a hydroxyl or amino group, on the binding agent. For example, the binding agent may be covalently attached to supports having an appropriate polymer coating using benzoquinone or by condensation of an aldehyde group on the support with an amine and an active hydrogen on the binding partner (*see, e.g.,* Pierce Immunotechnology Catalog and Handbook, 1991, at
10 A12-A13).

In certain embodiments, the assay is a two-antibody sandwich assay. This assay may be performed by first contacting an antibody that has been immobilized on a solid support, commonly the well of a microtiter plate, with the sample, such that polypeptides within the sample are allowed to bind to the immobilized antibody.
15 Unbound sample is then removed from the immobilized polypeptide-antibody complexes and a detection reagent (preferably a second antibody capable of binding to a different site on the polypeptide) containing a reporter group is added. The amount of detection reagent that remains bound to the solid support is then determined using a method appropriate for the specific reporter group.

20 More specifically, once the antibody is immobilized on the support as described above, the remaining protein binding sites on the support are typically blocked. Any suitable blocking agent known to those of ordinary skill in the art, such as bovine serum albumin or Tween 20™ (Sigma Chemical Co., St. Louis, MO). The immobilized antibody is then incubated with the sample, and polypeptide is allowed to
25 bind to the antibody. The sample may be diluted with a suitable diluent, such as phosphate-buffered saline (PBS) prior to incubation. In general, an appropriate contact time (*i.e.,* incubation time) is a period of time that is sufficient to detect the presence of polypeptide within a sample obtained from an individual with ovarian cancer. Preferably, the contact time is sufficient to achieve a level of binding that is at least
30 about 95% of that achieved at equilibrium between bound and unbound polypeptide. Those of ordinary skill in the art will recognize that the time necessary to achieve

equilibrium may be readily determined by assaying the level of binding that occurs over a period of time. At room temperature, an incubation time of about 30 minutes is generally sufficient.

Unbound sample may then be removed by washing the solid support
5 with an appropriate buffer, such as PBS containing 0.1% Tween 20™. The second antibody, which contains a reporter group, may then be added to the solid support. Preferred reporter groups include those groups recited above.

The detection reagent is then incubated with the immobilized antibody-polypeptide complex for an amount of time sufficient to detect the bound polypeptide.
10 An appropriate amount of time may generally be determined by assaying the level of binding that occurs over a period of time. Unbound detection reagent is then removed and bound detection reagent is detected using the reporter group. The method employed for detecting the reporter group depends upon the nature of the reporter group. For radioactive groups, scintillation counting or autoradiographic methods are
15 generally appropriate. Spectroscopic methods may be used to detect dyes, luminescent groups and fluorescent groups. Biotin may be detected using avidin, coupled to a different reporter group (commonly a radioactive or fluorescent group or an enzyme). Enzyme reporter groups may generally be detected by the addition of substrate (generally for a specific period of time), followed by spectroscopic or other analysis of
20 the reaction products.

To determine the presence or absence of a cancer, such as ovarian cancer, the signal detected from the reporter group that remains bound to the solid support is generally compared to a signal that corresponds to a predetermined cut-off value. In one preferred embodiment, the cut-off value for the detection of a cancer is
25 the average mean signal obtained when the immobilized antibody is incubated with samples from patients without the cancer. In general, a sample generating a signal that is three standard deviations above the predetermined cut-off value is considered positive for the cancer. In an alternate preferred embodiment, the cut-off value is determined using a Receiver Operator Curve, according to the method of Sackett et al., *Clinical*
30 *Epidemiology: A Basic Science for Clinical Medicine*, Little Brown and Co., 1985, p. 106-7. Briefly, in this embodiment, the cut-off value may be determined from a plot

of pairs of true positive rates (*i.e.*, sensitivity) and false positive rates (100%-specificity) that correspond to each possible cut-off value for the diagnostic test result. The cut-off value on the plot that is the closest to the upper left-hand corner (*i.e.*, the value that encloses the largest area) is the most accurate cut-off value, and a sample generating a
5 signal that is higher than the cut-off value determined by this method may be considered positive. Alternatively, the cut-off value may be shifted to the left along the plot, to minimize the false positive rate, or to the right, to minimize the false negative rate. In general, a sample generating a signal that is higher than the cut-off value determined by this method is considered positive for a cancer.

10 In a related embodiment, the assay is performed in a flow-through or strip test format, wherein the binding agent is immobilized on a membrane, such as nitrocellulose. In the flow-through test, polypeptides within the sample bind to the immobilized binding agent as the sample passes through the membrane. A second, labeled binding agent then binds to the binding agent-polypeptide complex as a solution
15 containing the second binding agent flows through the membrane. The detection of bound second binding agent may then be performed as described above. In the strip test format, one end of the membrane to which binding agent is bound is immersed in a solution containing the sample. The sample migrates along the membrane through a region containing second binding agent and to the area of immobilized binding agent.
20 Concentration of second binding agent at the area of immobilized antibody indicates the presence of a cancer. Typically, the concentration of second binding agent at that site generates a pattern, such as a line, that can be read visually. The absence of such a pattern indicates a negative result. In general, the amount of binding agent immobilized on the membrane is selected to generate a visually discernible pattern when the
25 biological sample contains a level of polypeptide that would be sufficient to generate a positive signal in the two-antibody sandwich assay, in the format discussed above. Preferred binding agents for use in such assays are antibodies and antigen-binding fragments thereof. Preferably, the amount of antibody immobilized on the membrane ranges from about 25 ng to about 1 μ g, and more preferably from about 50 ng to about
30 500 ng. Such tests can typically be performed with a very small amount of biological sample.

Of course, numerous other assay protocols exist that are suitable for use with the tumor proteins or binding agents of the present invention. The above descriptions are intended to be exemplary only. For example, it will be apparent to those of ordinary skill in the art that the above protocols may be readily modified to use
5 ovarian carcinoma polypeptides to detect antibodies that bind to such polypeptides in a biological sample. The detection of such ovarian carcinoma protein specific antibodies may correlate with the presence of a cancer.

A cancer may also, or alternatively, be detected based on the presence of T cells that specifically react with an ovarian carcinoma protein in a biological sample.
10 Within certain methods, a biological sample comprising CD4⁺ and/or CD8⁺ T cells isolated from a patient is incubated with an ovarian carcinoma protein, a polynucleotide encoding such a polypeptide and/or an APC that expresses at least an immunogenic portion of such a polypeptide, and the presence or absence of specific activation of the T cells is detected. Suitable biological samples include, but are not limited to, isolated
15 T cells. For example, T cells may be isolated from a patient by routine techniques (such as by Ficoll/Hypaque density gradient centrifugation of peripheral blood lymphocytes). T cells may be incubated *in vitro* for 2-9 days (typically 4 days) at 37°C with an ovarian carcinoma protein (*e.g.*, 5 - 25 µg/ml). It may be desirable to incubate another aliquot of a T cell sample in the absence of ovarian carcinoma protein to serve as a control. For
20 CD4⁺ T cells, activation is preferably detected by evaluating proliferation of the T cells. For CD8⁺ T cells, activation is preferably detected by evaluating cytolytic activity. A level of proliferation that is at least two fold greater and/or a level of cytolytic activity that is at least 20% greater than in disease-free patients indicates the presence of a cancer in the patient.

25 As noted above, a cancer may also, or alternatively, be detected based on the level of mRNA encoding an ovarian carcinoma protein in a biological sample. For example, at least two oligonucleotide primers may be employed in a polymerase chain reaction (PCR) based assay to amplify a portion of an ovarian carcinoma protein cDNA derived from a biological sample, wherein at least one of the oligonucleotide primers is
30 specific for (*i.e.*, hybridizes to) a polynucleotide encoding the ovarian carcinoma protein. The amplified cDNA is then separated and detected using techniques well

known in the art, such as gel electrophoresis. Similarly, oligonucleotide probes that specifically hybridize to a polynucleotide encoding an ovarian carcinoma protein may be used in a hybridization assay to detect the presence of polynucleotide encoding the tumor protein in a biological sample.

5 To permit hybridization under assay conditions, oligonucleotide primers and probes should comprise an oligonucleotide sequence that has at least about 60%, preferably at least about 75% and more preferably at least about 90%, identity to a portion of a polynucleotide encoding an ovarian carcinoma protein that is at least 10 nucleotides, and preferably at least 20 nucleotides, in length. Preferably,
10 oligonucleotide primers and/or probes hybridize to a polynucleotide encoding a polypeptide described herein under moderately stringent conditions, as defined above. Oligonucleotide primers and/or probes which may be usefully employed in the diagnostic methods described herein preferably are at least 10-40 nucleotides in length. In a preferred embodiment, the oligonucleotide primers comprise at least 10 contiguous
15 nucleotides, more preferably at least 15 contiguous nucleotides, of a DNA molecule having a sequence provided herein. Techniques for both PCR based assays and hybridization assays are well known in the art (*see*, for example, Mullis et al., *Cold Spring Harbor Symp. Quant. Biol.*, 51:263, 1987; Erlich ed., *PCR Technology*, Stockton Press, NY, 1989).

20 One preferred assay employs RT-PCR, in which PCR is applied in conjunction with reverse transcription. Typically, RNA is extracted from a biological sample such as a biopsy tissue and is reverse transcribed to produce cDNA molecules. PCR amplification using at least one specific primer generates a cDNA molecule, which may be separated and visualized using, for example, gel electrophoresis. Amplification
25 may be performed on biological samples taken from a test patient and from an individual who is not afflicted with a cancer. The amplification reaction may be performed on several dilutions of cDNA spanning two orders of magnitude. A two-fold or greater increase in expression in several dilutions of the test patient sample as compared to the same dilutions of the non-cancerous sample is typically considered
30 positive.

In another embodiment, ovarian carcinoma proteins and polynucleotides encoding such proteins may be used as markers for monitoring the progression of cancer. In this embodiment, assays as described above for the diagnosis of a cancer may be performed over time, and the change in the level of reactive polypeptide(s) evaluated. For example, the assays may be performed every 24-72 hours for a period of 6 months to 1 year, and thereafter performed as needed. In general, a cancer is progressing in those patients in whom the level of polypeptide detected by the binding agent increases over time. In contrast, the cancer is not progressing when the level of reactive polypeptide either remains constant or decreases with time.

Certain *in vivo* diagnostic assays may be performed directly on a tumor. One such assay involves contacting tumor cells with a binding agent. The bound binding agent may then be detected directly or indirectly via a reporter group. Such binding agents may also be used in histological applications. Alternatively, polynucleotide probes may be used within such applications.

As noted above, to improve sensitivity, multiple ovarian carcinoma protein markers may be assayed within a given sample. It will be apparent that binding agents specific for different proteins provided herein may be combined within a single assay. Further, multiple primers or probes may be used concurrently. The selection of tumor protein markers may be based on routine experiments to determine combinations that results in optimal sensitivity. In addition, or alternatively, assays for tumor proteins provided herein may be combined with assays for other known tumor antigens.

DIAGNOSTIC KITS

The present invention further provides kits for use within any of the above diagnostic methods. Such kits typically comprise two or more components necessary for performing a diagnostic assay. Components may be compounds, reagents, containers and/or equipment. For example, one container within a kit may contain a monoclonal antibody or fragment thereof that specifically binds to an ovarian carcinoma protein. Such antibodies or fragments may be provided attached to a support material, as described above. One or more additional containers may enclose elements, such as reagents or buffers, to be used in the assay. Such kits may also, or alternatively,

contain a detection reagent as described above that contains a reporter group suitable for direct or indirect detection of antibody binding.

Alternatively, a kit may be designed to detect the level of mRNA encoding an ovarian carcinoma protein in a biological sample. Such kits generally
5 comprise at least one oligonucleotide probe or primer, as described above, that hybridizes to a polynucleotide encoding an ovarian carcinoma protein. Such an oligonucleotide may be used, for example, within a PCR or hybridization assay. Additional components that may be present within such kits include a second
10 oligonucleotide and/or a diagnostic reagent or container to facilitate the detection of a polynucleotide encoding an ovarian carcinoma protein.

The following Examples are offered by way of illustration and not by way of limitation.

EXAMPLES

Example 1Identification of Representative Ovarian Carcinoma Protein cDNAs

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This Example illustrates the identification of cDNA molecules encoding ovarian carcinoma proteins.

Anti-SCID mouse sera (generated against sera from SCID mice carrying late passage ovarian carcinoma) was pre-cleared of E. coli and phage antigens and used at a 1:200 dilution in a serological expression screen. The library screened was made from a SCID-derived human ovarian tumor (OV9334) using a directional RH oligo(dT) priming cDNA library construction kit and the λ Screen vector (Novagen). A bacteriophage lambda screen was employed. Approximately 400,000 pfu of the amplified OV9334 library were screened.

15 196 positive clones were isolated. Certain sequences that appear to be novel are provided in Figures 1A-1S and SEQ ID NOs:1 to 71. Three complete insert sequences are shown in Figures 2A-2C (SEQ ID NOs:72 to 74). Other clones having known sequences are presented in Figures 15A-15EEE (SEQ ID NOs:82 to 310). Database searches identified the following sequences that were substantially identical to the sequences presented in Figures 15A-15EEE.

20 These clones were further characterized using microarray technology to determine mRNA expression levels in a variety of tumor and normal tissues. Such analyses were performed using a Synteni (Palo Alto, CA) microarray, according to the manufacturer's instructions. PCR amplification products were arrayed on slides, with each product occupying a unique location in the array. mRNA was extracted from the tissue sample to be tested, reverse transcribed and fluorescent-labeled cDNA probes were generated. The microarrays were probed with the labeled cDNA probes and the slides were scanned to measure fluorescence intensity. Data was analyzed using Synteni's provided GEMtools software. The results for one clone (13695, also referred to as O8E) are shown in Figure 3.

30

Example 2

Identification of Ovarian Carcinoma cDNAs using Microarray Technology

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This Example illustrates the identification of ovarian carcinoma polynucleotides by PCR subtraction and microarray analysis. Microarrays of cDNAs were analyzed for ovarian tumor-specific expression using a Synteni (Palo Alto, CA) microarray, according to the manufacturer's instructions (and essentially as described by Schena et al., *Proc. Natl. Acad. Sci. USA* 93:10614-10619, 1996 and Heller et al., *Proc. Natl. Acad. Sci. USA* 94:2150-2155, 1997).

A PCR subtraction was performed using a tester comprising cDNA of four ovarian tumors (three of which were metastatic tumors) and a driver of cDNA from five normal tissues (adrenal gland, lung, pancreas, spleen and brain). cDNA fragments recovered from this subtraction were subjected to DNA microarray analysis where the fragments were PCR amplified, adhered to chips and hybridized with fluorescently labeled probes derived from mRNAs of human ovarian tumors and a variety of normal human tissues. In this analysis, the slides were scanned and the fluorescence intensity was measured, and the data were analyzed using Synteni's GEMtools software. In general, sequences showing at least a 5-fold increase in expression in tumor cells (relative to normal cells) were considered ovarian tumor antigens. The fluorescent results were analyzed and clones that displayed increased expression in ovarian tumors were further characterized by DNA sequencing and database searches to determine the novelty of the sequences.

Using such assays, an ovarian tumor antigen was identified that is a splice fusion between the human T-cell leukemia virus type I oncoprotein TAX (see Jin et al., *Cell* 93:81-91, 1998) and an extracellular matrix protein called osteonectin. A splice junction sequence exists at the fusion point. The sequence of this clone is presented in Figure 4 and SEQ ID NO:75. Osteonectin, unspliced and unaltered, was also identified from such assays independently.

Further clones identified by this method are referred to herein as 3f, 6b, 8e, 8h, 12c and 12h. Sequences of these clones are shown in Figures 5 to 9 and SEQ ID NOs:76 to 81. Microarray analyses were performed as described above, and are presented in Figures 10 to 14. A full length sequence encompassing clones 3f, 6b, 8e and 12h was obtained by screening an ovarian tumor (SCID-derived) cDNA library. This 2996 base pair sequence (designated O772P) is presented in SEQ ID NO:311, and the encoded 914 amino acid protein sequence is shown in SEQ ID NO:312. PSORT analysis indicates a Type 1a transmembrane protein localized to the plasma membrane.

In addition to certain of the sequences described above, this screen identified the following sequences:

Sequence	Comments
OV4vG11 (SEQ ID NO:313)	human clone 1119D9 on chromosome 20p12
OV4vB11 (SEQ ID NO:314)	human UWGC:y14c094 from chromosome 6p21
OV4vD9 (SEQ ID NO:315)	human clone 1049G16 chromosome 20q12-13.2
OV4vD5 (SEQ ID NO:316)	human KIAA0014 gene
OV4vC2 (SEQ ID NO:317)	human KIAA0084 gene
OV4vF3 (SEQ ID NO:318)	human chromosome 19 cosmid R31167
OV4vC1 (SEQ ID NO:319)	novel
OV4vH3 (SEQ ID NO:320)	novel
OV4vD2 (SEQ ID NO:321)	novel
O815P (SEQ ID NO:322)	novel
OV4vC12 (SEQ ID NO:323)	novel
OV4vA4 (SEQ ID NO:324)	novel
OV4vA3 (SEQ ID NO:325)	novel
OV4v2A5 (SEQ ID NO:326)	novel
O819P (SEQ ID NO:327)	novel
O818P (SEQ ID NO:328)	novel
O817P (SEQ ID NO:329)	novel
O816P (SEQ ID NO:330)	novel
Ov4vC5 (SEQ ID NO:331)	novel

Sequence	Comments
21721 (SEQ ID NO:332)	human lumican
21719 (SEQ ID NO:333)	human retinoic acid-binding protein II
21717 (SEQ ID NO:334)	human26S proteasome ATPase subunit
21654 (SEQ ID NO:335)	human copine I
21627 (SEQ ID NO:336)	human neuron specific gamma-2 enolase
21623 (SEQ ID NO:337)	human geranylgeranyl transferase II
21621 (SEQ ID NO:338)	human cyclin-dependent protein kinase
21616 (SEQ ID NO:339)	human prepro-megakaryocyte potentiating factor
21612 (SEQ ID NO:340)	human UPH1
21558 (SEQ ID NO:341)	human RalGDS-like 2 (RGL2)
21555 (SEQ ID NO:342)	human autoantigen P542
21548 (SEQ ID NO:343)	human actin-related protein (ARP2)
21462 (SEQ ID NO:344)	human huntingtin interacting protein
21441 (SEQ ID NO:345)	human 90K product (tumor associated antigen)
21439 (SEQ ID NO:346)	human guanine nucleotide regulator protein (tim1)
21438 (SEQ ID NO:347)	human Ku autoimmune (p70/p80) antigen
21237 (SEQ ID NO:348)	human S-laminin
21436 (SEQ ID NO:349)	human ribophorin I
21435 (SEQ ID NO:350)	human cytoplasmic chaperonin hTRiC5
21425 (SEQ ID NO:351)	humanEMX2
21423 (SEQ ID NO:352)	human p87/p89 gene
21419 (SEQ ID NO:353)	human HPBRJII-7
21252 (SEQ ID NO:354)	human T1-227H
21251 (SEQ ID NO:355)	human cullin I
21247 (SEQ ID NO:356)	kunitz type protease inhibitor (KOP)
21244-1 (SEQ ID NO:357)	human protein tyrosine phosphatase receptor F (PTPRF)
21718 (SEQ ID NO:358)	human LTR repeat
OV2-90 (SEQ ID NO:359)	novel

Sequence	Comments
Human zinc finger (SEQ ID NO:360)	
Human polyA binding protein (SEQ ID NO:361)	
Human pleitrophin (SEQ ID NO:362)	
Human PAC clone 278C19 (SEQ ID NO:363)	
Human LLRep3 (SEQ ID NO:364)	
Human Kunitz type protease inhib (SEQ ID NO:365)	
Human KIAA0106 gene (SEQ ID NO:366)	
Human keratin (SEQ ID NO:367)	
Human HIV-1TAR (SEQ ID NO:368)	
Human glia derived nexin (SEQ ID NO:369)	
Human fibronectin (SEQ ID NO:370)	
Human ECMproBM40 (SEQ ID NO:371)	
Human collagen (SEQ ID NO:372)	
Human alpha enolase (SEQ ID NO:373)	
Human aldolase (SEQ ID NO:374)	
Human transf growth factor BIG H3 (SEQ ID NO:375)	
Human SPARC osteonectin (SEQ ID NO:376)	
Human SLP1 leucocyte protease (SEQ ID NO:377)	
Human mitochondrial ATP synth (SEQ ID NO:378)	
Human DNA seq clone 461P17 (SEQ ID NO:379)	
Human dbpB pro Y box (SEQ ID NO:380)	
Human 40 kDa keratin (SEQ ID NO:381)	
Human arginosuccinate synth (SEQ ID NO:382)	
Human acidic ribosomal phosphoprotein (SEQ ID NO:383)	
Human colon carcinoma laminin binding pro (SEQ ID NO:384)	

This screen further identified multiple forms of the clone O772P, referred to herein as 21013, 21003 and 21008. PSORT analysis indicates that 21003 (SEQ ID NO:386; translated as SEQ ID NO:389) and 21008 (SEQ ID NO:387; translated as SEQ ID NO:390) represent Type 1a transmembrane protein forms of

O772P. 21013 (SEQ ID NO:385; translated as SEQ ID NO:388) appears to be a truncated form of the protein and is predicted by PSORT analysis to be a secreted protein.

Additional sequence analysis resulted in a full length clone for O8E
5 (2627 bp, which agrees with the message size observed by Northern analysis; SEQ ID NO:391). This nucleotide sequence was obtained as follows: the original O8E sequence (OrigO8Econs) was found to overlap by 33 nucleotides with a sequence from an EST clone (IMAGE#1987589). This clone provided 1042 additional nucleotides upstream of the original O8E sequence. The link between the EST and O8E was confirmed by
10 sequencing multiple PCR fragments generated from an ovary primary tumor library using primers to the unique EST and the O8E sequence (ESTxO8EPCR). Full length status was further indicated when anchored PCR from the ovary tumor library gave several clones (AnchoredPCR cons) that all terminated upstream of the putative start methionine, but failed to yield any additional sequence information. Figure 16 presents
15 a diagram that illustrates the location of each partial sequence within the full length O8E sequence.

Two protein sequences may be translated from the full length O8E. For "a" (SEQ ID NO:393) begins with a putative start methionine. A second form "b" (SEQ ID NO:392) includes 27 additional upstream residues to the 5' end of the nucleotide
20 sequence.

From the foregoing it will be appreciated that, although specific embodiments of the invention have been described herein for purposes of illustration, various modifications may be made without deviating from the spirit and scope of the invention. Accordingly, the invention is not limited except as by the appended claims.
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SUMMARY OF SEQUENCE LISTING

SEQ ID NOs:1-71 are ovarian carcinoma antigen polynucleotides shown in Figures 1A-1S.

SEQ ID NOs:72-74 are ovarian carcinoma antigen polynucleotides
30 shown in Figures 2A-2C.

SEQ ID NO:75 is the ovarian carcinoma polynucleotide 3g (Figure 4).

SEQ ID NO:76 is the ovarian carcinoma polynucleotide 3f (Figure 5).
SEQ ID NO:77 is the ovarian carcinoma polynucleotide 6b (Figure 6).
SEQ ID NO:78 is the ovarian carcinoma polynucleotide 8e (Figure 7A).
SEQ ID NO:79 is the ovarian carcinoma polynucleotide 8h (Figure 7B).
5 SEQ ID NO:80 is the ovarian carcinoma polynucleotide 12e (Figure 8).
SEQ ID NO:81 is the ovarian carcinoma polynucleotide 12h (Figure 9).
SEQ ID NOs:82-310 are ovarian carcinoma antigen polynucleotides
shown in Figures 15A-15EEE.

SEQ ID NO:311 is a full length sequence of ovarian carcinoma
10 polynucleotide O772P.

SEQ ID NO:312 is the O772P amino acid sequence.

SEQ ID NOs:313-384 are ovarian carcinoma antigen polynucleotides.

SEQ ID NOs:385-390 present sequences of O772P forms.

SEQ ID NO:391 is a full length sequence of ovarian carcinoma
15 polynucleotide O8E.

SEQ ID NOs:392-393 are protein sequences encoded by O8E.

CLAIMS

1. An isolated polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein, or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:
 - (a) polynucleotides recited in any one of SEQ ID NOs:1-81, 313-331, 359, 366, 379, 385-387 or 391; and
 - (b) complements of the foregoing polynucleotides.
2. A polypeptide according to claim 1, wherein the polypeptide comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:
 - (a) polynucleotides recited in any one of 1-81, 313-331, 359, 366, 379, 385-387 or 391; and
 - (b) complements of such polynucleotides.
3. An isolated polynucleotide encoding at least 5 amino acid residues of a polypeptide according to claim polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein, or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:
 - (a) polynucleotides recited in any one of SEQ ID NOs:1-81, 319-331, 359, 385-387 or 391; and
 - (b) complements of the foregoing polynucleotides

4. A polynucleotide according to claim 3, wherein the polynucleotide encodes an immunogenic portion of the polypeptide.
5. A polynucleotide according to claim 3, wherein the polynucleotide comprises a sequence recited in any one of SEQ ID NOs:1-81, 319-331, 359, 385-387, 391 or a complement of any of the foregoing sequences.
6. An isolated polynucleotide complementary to a polynucleotide according to claim 3.
7. An expression vector comprising a polynucleotide according to claim 3 or claim 6.
8. A host cell transformed or transfected with an expression vector according to claim 7.
9. A pharmaceutical composition comprising a polypeptide according to claim 1, in combination with a physiologically acceptable carrier.
10. A pharmaceutical composition according to claim 9, wherein the polypeptide comprises an amino acid sequence encoded by a polynucleotide that comprises a sequence recited in any one of SEQ ID NOs:1-81, 313-331, 359, 366, 379, 385-387 or 391.
11. A vaccine comprising a polypeptide according to claim 1, in combination with a non-specific immune response enhancer.
12. A vaccine according to claim 11, wherein the polypeptide comprises an amino acid sequence encoded by a polynucleotide that comprises a sequence recited in any one of SEQ ID NOs:1-81, 313-331, 359, 366, 379, 385-387 or 391.
13. A pharmaceutical composition comprising:

(a) a polynucleotide encoding an ovarian carcinoma polypeptide, wherein the polypeptide comprises at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-81, 319-331, 359, 385-387 or 391; and

(ii) complements of the foregoing polynucleotides; and

(b) a physiologically acceptable carrier.

14. A pharmaceutical composition according to claim 13, wherein the polynucleotide comprises a sequence recited in any one of SEQ ID NOs:1-81, 319-331, 359, 385-387, 391 or a complement of any of the foregoing sequences.

15. A vaccine comprising:

(a) a polynucleotide encoding an ovarian carcinoma polypeptide, wherein the polypeptide comprises at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-81, 313-331, 359, 366, 379, 385-387 or 391; and

(ii) complements of the foregoing polynucleotides; and

16. A vaccine according to claim 15, wherein the polynucleotide comprises a sequence recited in any one of SEQ ID NOs:1-81, 319-331, 359, 385-387 or 391.

17. A pharmaceutical composition comprising:

(a) an antibody that specifically binds to an ovarian carcinoma protein, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-81, 313-331, 359, 366, 379, 385-387 or 391; and

(ii) complements of such polynucleotides; and

(b) a physiologically acceptable carrier.

18. A method for inhibiting the development of ovarian cancer in a patient, comprising administering to a patient an effective amount of an agent selected from the group consisting of:

(a) an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

(ii) complements of such polynucleotides;

(b) a polynucleotide encoding a polypeptide as recited in (a); and

(c) an antibody that specifically binds to an ovarian carcinoma protein that comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

(ii) complements of such polynucleotides;

and thereby inhibiting the development of ovarian cancer in the patient.

19. A method according to claim 18, wherein the agent is present within a pharmaceutical composition according to any one of claims 9, 13 or 17.
20. A method according to claim 18, wherein the agent is present within a vaccine according to any one of claims 11, 15 or 18.
21. A fusion protein comprising at least one polypeptide according to claim 1.
22. A polynucleotide encoding a fusion protein according to claim 21.
23. A pharmaceutical composition comprising a fusion protein according to claim 21 in combination with a physiologically acceptable carrier.
24. A vaccine comprising a fusion protein according to claim 21 in combination with a non-specific immune response enhancer.
25. A pharmaceutical composition comprising a polynucleotide according to claim 22 in combination with a physiologically acceptable carrier.
26. A vaccine comprising a polynucleotide according to claim 22 in combination with a non-specific immune response enhancer.
27. A method for inhibiting the development of ovarian cancer in a patient, comprising administering to a patient an effective amount of a pharmaceutical composition according to claim 23 or claim 25.
28. A method for inhibiting the development of ovarian cancer in a patient, comprising administering to a patient an effective amount of a vaccine according to claim 23 or claim 26.

29. A pharmaceutical composition, comprising:

(a) an antigen presenting cell that expresses an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

(ii) complements of such polynucleotides; and

(b) a pharmaceutically acceptable carrier or excipient.

30. A vaccine, comprising:

(a) an antigen presenting cell that expresses an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

(ii) complements of such polynucleotides; and

(b) a non-specific immune response enhancer.

31. A vaccine comprising:

(a) an anti-idiotypic antibody or antigen-binding fragment thereof that is specifically bound by an antibody that specifically binds to an ovarian carcinoma protein that comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

- (ii) complements of such polynucleotides; and
- (b) non-specific immune response enhancer.

32. A vaccine according to claim 30 or claim 31, wherein the immune response enhancer is an adjuvant.

33. A pharmaceutical composition, comprising:

(a) a T cell that specifically reacts with an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

(ii) complements of such polynucleotides; and

(b) a physiologically acceptable carrier.

34. A vaccine, comprising:

(a) a T cell that specifically reacts with an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

(ii) complements of such polynucleotides; and

(b) a non-specific immune response enhancer.

35. A method for inhibiting the development of ovarian cancer in a patient, comprising administering to the patient an effective amount of a pharmaceutical composition according to claim 29 or claim 33.

36. A method for inhibiting the development of ovarian cancer in a patient, comprising administering to the patient an effective amount of a vaccine according to any one of claims 30, 31 or 34.

37. A method for stimulating and/or expanding T cells, comprising contacting T cells with:

(a) an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

(ii) complements of such polynucleotides;

(b) a polynucleotide encoding such a polypeptide; and/or

(c) an antigen presenting cell that expresses such a polypeptide under conditions and for a time sufficient to permit the stimulation and/or expansion of T cells.

38. A method according to claim 37, wherein the T cells are cloned prior to expansion.

39. A method for stimulating and/or expanding T cells in a mammal, comprising administering to a mammal a pharmaceutical composition comprising:

(a) one or more of:

(i) an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one

or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

complements of such polynucleotides;

(ii) a polynucleotide encoding an ovarian carcinoma polypeptide;

or

(iii) an antigen-presenting cell that expresses an ovarian carcinoma polypeptide; and

(b) a physiologically acceptable carrier or excipient;

and thereby stimulating and/or expanding T cells in a mammal.

40. A method for stimulating and/or expanding T cells in a mammal, comprising administering to a mammal a vaccine comprising:

(a) one or more of:

(i) an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

complements of such polynucleotides;

(ii) a polynucleotide encoding an ovarian carcinoma polypeptide;

or

(iii) an antigen-presenting cell that expresses an ovarian carcinoma polypeptide; and

- (b) a non-specific immune response enhancer;
and thereby stimulating and/or expanding T cells in a mammal.

41. A method for inhibiting the development of ovarian cancer in a patient, comprising administering to a patient T cells prepared according to the method of claim 39 or claim 40.

42. A method for inhibiting the development of ovarian cancer in a patient, comprising the steps of:

- (a) incubating CD4⁺ T cells isolated from a patient with one or more of:
 - (i) an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

complements of such polynucleotides;

- (ii) a polynucleotide encoding an ovarian carcinoma polypeptide;
- or
- (iii) an antigen-presenting cell that expresses an ovarian carcinoma polypeptide;

such that T cells proliferate; and

- (b) administering to the patient an effective amount of the proliferated T cells, and therefrom inhibiting the development of ovarian cancer in the patient.

43. A method for inhibiting the development of ovarian cancer in a patient, comprising the steps of:

- (a) incubating CD4⁺ T cells isolated from a patient with one or more of:

(i) an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

complements of such polynucleotides;

(ii) a polynucleotide encoding an ovarian carcinoma polypeptide;
or

(iii) an antigen-presenting cell that expresses an ovarian carcinoma polypeptide;

such that T cells proliferate;

(b) cloning one or more proliferated cells; and

(c) administering to the patient an effective amount of the cloned T cells.

44. A method for inhibiting the development of ovarian cancer in a patient, comprising the steps of:

(a) incubating CD8⁺ T cells isolated from a patient with one or more of:

(i) an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

complements of such polynucleotides;

- (ii) a polynucleotide encoding an ovarian carcinoma polypeptide;
 - or
 - (iii) an antigen-presenting cell that expresses an ovarian carcinoma polypeptide;
- such that T cells proliferate; and
- (b) administering to the patient an effective amount of the proliferated T cells, and therefrom inhibiting the development of ovarian cancer in the patient.

45. A method for inhibiting the development of ovarian cancer in a patient, comprising the steps of:

- (a) incubating CD8⁺ T cells isolated from a patient with one or more of:
 - (i) an ovarian carcinoma polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein or a variant thereof that differs in one or more substitutions, deletions, additions and/or insertions such that the ability of the variant to react with antigen-specific antisera is not substantially diminished, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:
 - polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and
 - complements of such polynucleotides;
 - (ii) a polynucleotide encoding an ovarian carcinoma polypeptide;
 - or
 - (iii) an antigen-presenting cell that expresses an ovarian carcinoma polypeptide;
- such that the T cells proliferate;
- (b) cloning one or more proliferated cells ; and
 - (c) administering to the patient an effective amount of the cloned T cells.

46. A method for identifying a secreted tumor antigen, comprising the steps of:

- (a) implanting tumor cells in an immunodeficient mammal;
- (b) obtaining serum from the immunodeficient mammal after a time sufficient to permit secretion of tumor antigens into the serum;
- (c) immunizing an immunocompetent mammal with the serum;
- (d) obtaining antiserum from the immunocompetent mammal; and
- (e) screening a tumor expression library with the antiserum, and therefrom identifying a secreted tumor antigen.

47. A method according to claim 46, wherein the immunodeficient mammal is a SCID mouse and wherein the immunocompetent mammal is an immunocompetent mouse.

48. A method for identifying a secreted ovarian carcinoma antigen, comprising the steps of:

- (a) implanting ovarian carcinoma cells in a SCID mouse;
- (b) obtaining serum from the SCID mouse after a time sufficient to permit secretion of ovarian carcinoma antigens into the serum;
- (c) immunizing an immunocompetent mouse with the serum;
- (d) obtaining antiserum from the immunocompetent mouse; and
- (e) screening an ovarian carcinoma expression library with the antiserum, and therefrom identifying a secreted ovarian carcinoma antigen.

49. A method for determining the presence or absence of a cancer in a patient, comprising the steps of:

- (a) contacting a biological sample obtained from a patient with a binding agent that binds to an ovarian carcinoma protein, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

- (i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and
- (ii) complements of the foregoing polynucleotides;
- (b) detecting in the sample an amount of polypeptide that binds to the binding agent; and
- (c) comparing the amount of polypeptide to a predetermined cut-off value, and therefrom determining the presence or absence of a cancer in the patient.

50. A method according to claim 49, wherein the binding agent is an antibody.

51. A method according to claim 50, wherein the antibody is a monoclonal antibody.

52. A method according to claim 49, wherein the cancer is ovarian cancer.

53. A method for monitoring the progression of a cancer in a patient, comprising the steps of:

- (a) contacting a biological sample obtained from a patient at a first point in time with a binding agent that binds to an ovarian carcinoma protein, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

- (i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

- (ii) complements of the foregoing polynucleotides;

- (b) detecting in the sample an amount of polypeptide that binds to the binding agent;

- (c) repeating steps (a) and (b) using a biological sample obtained from the patient at a subsequent point in time; and

(d) comparing the amount of polypeptide detected in step (c) to the amount detected in step (b) and therefrom monitoring the progression of the cancer in the patient.

54. A method according to claim 53, wherein the binding agent is an antibody.

55. A method according to claim 54, wherein the antibody is a monoclonal antibody.

56. A method according to claim 53, wherein the cancer is ovarian cancer.

57. A method for determining the presence or absence of a cancer in a patient, comprising the steps of:

(a) contacting a biological sample obtained from a patient with an oligonucleotide that hybridizes to a polynucleotide that encodes an ovarian carcinoma protein, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

(ii) complements of the foregoing polynucleotides;

(b) detecting in the sample an amount of a polynucleotide that hybridizes to the oligonucleotide; and

(c) comparing the amount of polynucleotide that hybridizes to the oligonucleotide to a predetermined cut-off value, and therefrom determining the presence or absence of a cancer in the patient.

58. A method according to claim 57, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using a polymerase chain reaction.

59. A method according to claim 57, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using a hybridization assay.

60. A method for monitoring the progression of a cancer in a patient, comprising the steps of:

(a) contacting a biological sample obtained from a patient with an oligonucleotide that hybridizes to a polynucleotide that encodes an ovarian carcinoma protein, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

(i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and

(ii) complements of the foregoing polynucleotides;

(b) detecting in the sample an amount of a polynucleotide that hybridizes to the oligonucleotide;

(c) repeating steps (a) and (b) using a biological sample obtained from the patient at a subsequent point in time; and

(d) comparing the amount of polynucleotide detected in step (c) to the amount detected in step (b) and therefrom monitoring the progression of the cancer in the patient.

61. A method according to claim 60, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using a polymerase chain reaction.

62. A method according to claim 60, wherein the amount of polynucleotide that hybridizes to the oligonucleotide is determined using a hybridization assay.

63. A diagnostic kit, comprising:

(a) one or more antibodies or antigen-binding fragments thereof that specifically bind to an ovarian carcinoma protein that comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

- (i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and
- (ii) complements of the foregoing polynucleotides.; and
- (b) a detection reagent comprising a reporter group.

64. A kit according to claim 63, wherein the antibodies are immobilized on a solid support.

65. A kit according to claim 63, wherein the solid support comprises nitrocellulose, latex or a plastic material.

66. A kit according to claim 63, wherein the detection reagent comprises an anti-immunoglobulin, protein G, protein A or lectin.

67. A kit according to claim 63, wherein the reporter group is selected from the group consisting of radioisotopes, fluorescent groups, luminescent groups, enzymes, biotin and dye particles.

68. A diagnostic kit, comprising:

(a) an oligonucleotide comprising 10 to 40 nucleotides that hybridize under moderately stringent conditions to a polynucleotide that encodes an ovarian carcinoma protein, wherein the ovarian carcinoma protein comprises an amino acid sequence that is encoded by a polynucleotide sequence selected from the group consisting of:

- (i) polynucleotides recited in any one of SEQ ID NOs:1-387 or 391; and
- (ii) complements of the foregoing polynucleotides; and
- (b) a diagnostic reagent for use in a polymerase chain reaction or hybridization assay.

SEQUENCE LISTING

<110> Corixa Corporation

<120> COMPOSITIONS AND METHODS FOR THE THERAPY AND
DIAGNOSIS OF OVARIAN CANCER

<130> 210121.462PC

<140> PCT

<141> 1999-12-17

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<212> DNA

<213> Homo sapien

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agcttattac	tggggtgagg	gacagcttac	tccatttgac	cagattgttt	ggctaacaca	960
tcccgaagaa	tgattttgtc	aggaattatt	gttatttaaat	aaatatttca	ggatattttt	1020
cctctacaat	aaagtaacaa	t				1041

<210> 19

<211> 1043

<212> DNA

<213> Homo sapien

<400> 19

ctctgtggaa	aactgatgag	gaatgaattt	accattaccc	atgtttctcat	ccccaaagcaa	60
agtgtctgggt	ctgattactg	caacacagag	aacgaagaag	aactttttcct	catacaggat	120
cagcagggcc	tcacacact	gggctggatt	catactcacc	ccacacagac	cgcgtttctc	180
tccagtgtcg	acctacacac	tactgtctct	taccagatga	tgttgccaga	gtcagtagcc	240
attgtttgct	cccccaagtt	ccaggaaact	ggattcttta	aactaactga	ccatggacta	300
gaggagattt	cttcctgtcg	ccagaaagga	tttcatccac	acagcaagga	tccacctctg	360
ttctgtagct	gcagccacgt	gactgttggt	gacagagcag	tgaccatcac	agaccttcga	420
tgagcgtttg	agtccaacac	cttccaagaa	caacaaaacc	atatcagtgt	actgtagccc	480
cttaatttaa	gctttctaga	aagctttgga	agtttttgta	gatagtagaa	aggggggcat	540
cacctgagaa	agagctgatt	ttgtatttca	ggtttgaaaa	gaaataactg	aacatatttt	600
ttaggcaagt	cagaaagaga	acatggtcac	ccaaaagcaa	ctgtaactca	gaaattaagt	660
tactcagaaa	ttaagtagct	cagaaattaa	gaaagaatgg	tataatgaac	ccccatatac	720
ccttccttct	ggattcacca	attgttaaca	tttttttcct	ctcagctatc	cttctaattt	780
ctctctaatt	tcaatttggt	tatatattacc	tctgggctca	ataagggcat	ctgtgcagaa	840
atttgaagc	catttagaaa	atcttttgga	ttttcctgtg	gtttatggca	atatgaatgg	900
agcttattac	tggggtgagg	gacagcttac	tccatttgac	cagattgttt	ggctaacaca	960
tcccgaagaa	tgattttgtc	aggaattatt	gttatttaaat	aaatatttca	ggatattttt	1020
cctctacaat	aaagtaacaa	tta				1043

<210> 20

<211> 448

<212> DNA

<213> Homo sapien

<400> 20

ggacgacaag	gccatggcga	tatcggatcc	gaattcaagc	ctttggaatt	aaataaacct	60
ggaacagggg	aggtgaaagt	tggagtgaga	tgtcttccat	atctatacct	ttgtgcacag	120
ttgaatggga	actgtttggg	tttagggcat	cttagagttg	attgatggaa	aaagcagaca	180

ggaactgggtg	ggaggtcaag	tggggaagtt	ggtgaatgtg	gaataactta	cctttgtgct	240
ccacttaaac	cagatgtgtt	gcagctttcc	tgacatgcaa	ggatctactt	taattccaca	300
ctctcattaa	taaattgaat	aaaagggaat	gttttggcac	ctgatataat	ctgccaggct	360
atgtgacagt	aggaaggaat	ggtttccctt	aacaagccca	atgcactggt	ctgactttat	420
aaattattta	ataaaatgaa	ctattatc				448

<210> 21
 <211> 411
 <212> DNA
 <213> Homo sapien

<400> 21						
ggcagtga	ttcaccatca	tgggaaccac	cttccctttt	cttcaggatt	ctctgtagtg	60
gaagagagca	cccagtgttg	ggctgaaaac	atctgaaagt	agggagaaga	acctaaaata	120
atcagtatct	cagagggctc	taagggtgcc	agaagtctca	ctggacattt	aagtgccaac	180
aaaggcatac	tttcggaatc	gccaaagtcaa	aactttctaa	cttctgtctc	tctcagagac	240
aagtgagact	caagagtcta	ctgctttagt	ggcaactaca	gaaaactggt	gttaccagag	300
aaaacaggag	caattagaaa	tggttccaat	atttcaaagc	tccgcaaaca	ggatgtgctt	360
tcctttgccc	atttaggggt	tcttctcttt	cctttctctt	tattaaccac	t	411

<210> 22
 <211> 896
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(896)
 <223> n = A,T,C or G

<400> 22						
tgcgctgaaa	acaacggcct	cctttactgt	taaaatgcag	ccacaggtgc	ttagccgtgg	60
gcattctcaac	caccagcctc	tgtggggggc	aggtgggctg	ccctgtgggc	ctctggggcc	120
acgtccagcc	tctgtcctct	gccttccgtt	cttcgacagt	gttcccggca	tccctgggtca	180
cttggtactt	ggcgtggggc	tcctgtgctg	ctccagcagc	tcctccaggc	ggtcggcccg	240
cttcaccgca	gcctcatgtt	gtgtccggag	gtgtctcacg	gcctcctcct	tcctcgcgag	300
ggctgtcttc	accctccggn	gcacctcctc	cagctccagc	tgtgtggggg	cctgcagcgt	360
ggccagctcg	gccttggcct	gcgcgctctc	ctcctcarag	gttgccagcc	ggtcctcgaa	420
ctcctggcgg	atcacctggg	ccaggttgct	gcgctcgcta	gaaagtgtgt	cggtcaccgc	480
ctgcgcatcc	tccagcgccc	gtccttctct	ccgcacaagg	ccctgcagac	gcagattctc	540
gcctcgggcc	tccccaagct	ggcccttcag	ctccgagcac	cgctcctgaa	gcttcgcttc	600
cgactgtctc	agctcggaga	gtcgggcctc	gtacttgctc	cgtaagcgct	tgatgcggct	660
ctcggcagcc	ttctcactct	cctccttggc	cagcgccatg	tcggcctcca	gccgggtgaat	720
gaccagctca	atctccttgt	cccggccttt	ccggatttct	tccctcagct	cctgttcccg	780
gttcagcagc	cacgcctcct	ccttctctgt	gcggccggcc	tcccacgcct	gcctctccag	840
ctccagctgc	tgtttcaggg	tattcagctc	catctggcgg	gcctgcagcg	tggcca	896

<210> 23
 <211> 111
 <212> DNA
 <213> Homo sapien

<400> 23						
caacttatta	cttgaaatta	taatatagcc	tgtccggttg	ctgtttccag	gctgtgatat	60
attttcctag	tggtttgact	ttaaaaaata	ataaggttta	attttctccc	c	111

<210> 24
 <211> 531
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(531)
 <223> n = A,T,C or G

<400> 24
 tgcaagtcac gggagtttat ttattttaatt tttttcccca gatggagact ctgtcgccca 60
 ggctggagtg caatgggtgtg atcttggctc actgcaacct ccacctcttg ggttcaagcg 120
 attctcctgc cacagcctcc cgagtagctg ggattacagg tgcccgccac cacacccagc 180
 taatttttat atttttagta aagacagggt ttcccatgt tggccaggct ggtcttgaac 240
 ttctgacctc aggtgatcca cctgcctcgg cctcccaaag tgttgggatt acaggcgtga 300
 gctaccctgt cctggccagc cactggagtt taaaggacag tcatgttggc tccagcctaa 360
 ggcggcattt tccccatca gaaagcccgc ggctcctgta cctcaaaaata gggcacctgt 420
 aaagtcagtc agtgaagtct ctgctctaac tggccacccg gggccattgg cntctgacac 480
 agccttgcca ggangcctgc atctgcaaaa gaaaagtcca cttcctttcc g 531

<210> 25
 <211> 471
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(471)
 <223> n = A,T,C or G

<400> 25
 cagagaatct kagaaagatg tgcggttttc ttttaatgaa tgagagaagc ccatttgtat 60
 ccctgaatca ttgagaaaag ggcggcggtg cgacagcggc gacctagga tcgatctgga 120
 gggacttggg gagcgtgcag agacctctag ctgcagcggc agggacctcc cgcggggatg 180
 cctggggagc agatggacct tactggaagt cagttggatt cagatttctc tcagcaagat 240
 actccttgcc tgataattga agattctcag cctgaaaagc aggttctaga ggatgattct 300
 ggttctcact tcagtatgct atctcgacac cttcctaate tccagacgca caaagaaaat 360
 cctgtgttgg atgttngtc caatccttga acaaacagct ggagaagaac gaggagaccg 420
 gtaatagtgg gttcaatgaa catattgaaag aaaaccagggt tgcagaccct g 471

<210> 26
 <211> 541
 <212> DNA
 <213> Homo sapien

<400> 26
 gactgtcctg aacaagggac ctctgaccag agagctgcag gagatgcaga gtggtggcag 60
 gactggaagc caaagaacac ccaccttctt cccttgaagg agtagagcaa ccacagaag 120
 atactgtttt attgctcttg tcaaacaagt cttcctgagt tgacaaaacc tcaggctctg 180
 gtgacttctg aatctgcagt ccactttcca taagtcttg tgcagacaac tgttcttttg 240
 cttccatagc agcaacagat gctttggggc taaaaggcat gtcctctgac cttgcagggtg 300
 gtggattttg ctctttttaca acatgtacat ccttactggg ctgtgctgtc acagggatgt 360
 ccttgctgga ctgttctgct atggggatat cttcgttgga ctgttcttca tgcttaattg 420

```

cagtattagc atccacatca gacagcctgg tataaccaga gttggtggtt actgattgta      480
gctgctcttt gtccacttca tatggcacia gtatcttcct caacatcctg gctctgggaa      540
g                                                                    541

```

```

<210> 27
<211> 461
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(461)
<223> n = A,T,C or G

```

```

<400> 27
gaaatgtata tttaatcatt ctcttgaacg atcagaactc traaatcagt tttctataac      60
arcatgtaat acagtcaccg tggctccaag gtccaggaag gcagtgggta acacatgaag      120
agtgtgggaa gggggctgga aacaaagtat tcttttcctt caaagcttca ttcctcaagg      180
cctcaattca agcagtcatt gtccttgctt tcaaaagtct gtgtgtgctt catggaaggt      240
atatgtttgt tgccttaatt tgaattgtgg ccaggaaggg tctggagatc taaattcaga      300
gtaagaaaac ctgagctaga actcaggcat ttctcttaca gaacttggct tgcagggtag      360
aatgaangga aagaaactta gaagctcaac aagctgaaga taatcccatc aggcatttcc      420
cataggcctt gcaactctgt tcaactgagag atgtttatcct g                                                                    461

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```

<210> 28
<211> 541
<212> DNA
<213> Homo sapien

```

```

<400> 28
agtctggagt gagcaaaaa gagcaagaaa caarragaag ccaaaagcag aaggctccaa      60
tatgaacaag ataaatctat cttcaaagac atattagaag ttgggaaaat aattcatgtg      120
aactagacaa gtgtgttaag agtgataagt aaaatgcacg tggagacaag tgcattccca      180
gatctcaggg acctccccct gcctgtcacc tggggagtga gaggacagga tagtgcatgt      240
tctttgtctc tgaattttta gttatatgtg ctgtaatgtt gctctgagga agcccctgga      300
aagtcctatcc caacatatcc acatcttata ttccacaaat taagctgtag tatgtaccct      360
aagacgctgc taattgactg ccacttcgca actcaggggc ggctgcattt tagtaatggg      420
tcaaattgatt cactttttat gatgcttccc aagggtgcctt ggcttctctt cccaactgac      480
aaatgcccaa gttgagaaaa atgatcataa ttttagcata aaccgagcaa tcggcgaccc      540
c                                                                    541

```

```

<210> 29
<211> 411
<212> DNA
<213> Homo sapien

```

```

<400> 29
tagctgtctt cctcactctt atggcaatga ccccatatct taatggatta agataatgaa      60
agtgtatttc ttacactctg tatctatcac cagaagctga ggtgatagcc cgcttgctcat      120
tgtcatccat attctgggac tcaggcggga actttctgga atattgccag ggagcatggc      180
agagggggcac agtgcattct gggggaatgc acattggctc agcctgggta atgagtgata      240
tacattacct ctgttcacaa ctcatggccc agcaccagtc acaaggcccc accaaatacc      300
agagcccaag aaatgtagtc ctgttgatat ggttttgctg tgtcccaacc caaatctcat      360
cttgaattgt aagctcccat aattcccatg tgttggtggga gggacctggg g                                                                    411

```

<210> 30
 <211> 511
 <212> DNA
 <213> Homo sapien

<400> 30
 atcatgagga tgttaccaaa gggatggtac taaaccattt gtattcgtct gttttcacac 60
 tgctttgaag atactacctg agactgggta atttataaac aaaagagatt taattgactc 120
 acagttctgc atggctgaag aggcctcagg aaacttacag tcatggtgga aggcaaagga 180
 ggagcaaggc atgtcttaca tgtcagtagg agagagagcg agagcaggag aacctgccac 240
 ttataaacca ttcagatctc ataactccct atcatgagaa aaacatggag gaaaccaccc 300
 tcatgatcca atcacctccc gccagggtccc tccctcgaca cgtggggatt ataattcagg 360
 attagaggga cacagagaca aaccatatca tcatcatga gaaatccacc ctcatagtec 420
 aatcagctcc taccaggccc cacctccaac actggggatt gcaattcaac atgagatttg 480
 gatggggaca cagattcaaa ccatatcata c 511

<210> 31
 <211> 827
 <212> DNA
 <213> Homo sapien

<400> 31
 catggccttt ctcccttagag gccagaggtg ctgccctggc tgggagtga gctccaggca 60
 ctaccagctt tcttgatttt cccgtttggt ccatgtgaag agctaccacg agccccagcc 120
 tcacagtgtc cactcaaggg cagcttggtc ctcttgctct gcagaggcag gctggtgtga 180
 ccctgggaac ttgaccggg aacaacaggt ggcccagagt gagtgtggcc tggcccctca 240
 acctagtgtc cgtcctctc tctcctggag ccagtcttga gtttaaaggc attaagtgtt 300
 agatacaagc tccttgtggtc tggaaaaaca cccctctgct gataaagctc agggggcact 360
 gaggaagcag agggcccttg ggggtgccct cctgaagaga gcgtcaggcc atcagctctg 420
 tccctctggt gctccacgt ctgttctca cctccatct ctgggagcag ctgcacctga 480
 ctggccacgc gggggcagtg gaggcacagg ctgaggtgg ccgggctacc tggcacccta 540
 tggcttacaa agtagagttg gccagtttc ctccacctg aggggagcac tctgactcct 600
 aacagtcttc cttgccctgc catcatctgg ggtggctggc tgtcaagaaa ggccgggcat 660
 gctttctaaa cacagccaca ggaggcttgt agggcatctt ccagggtggg aaacagtctt 720
 agataagtaa ggtgacttgc ctaaggcctc ccagcacctt tgatcttga gtctcacagc 780
 agactgcatg tsaacaactg gaaccgaaaa catgcctcag tataaaa 827

<210> 32
 <211> 291
 <212> DNA
 <213> Homo sapien

<400> 32
 ccagaacctc cttctctttg gagaatgggg aggcctcttg gagacacaga gggtttcacc 60
 ttggatgacc tctagagaaa ttgcccaaga agcccacctt ctggteccaa cctgcagacc 120
 ccacagcagt cagttggtca ggcctgctg tagaaggtea cttggctcca ttgctgctt 180
 ccaaccaatg ggcaggagag aaggccttta tttctcgccc acccattctc ctgtaccagc 240
 acctccgttt tcagtcagygt ttgtccagca acgggtaccgt ttacacagtc a 291

<210> 33
 <211> 491
 <212> DNA
 <213> Homo sapien

<400> 33

```

tgcattgtagt tttattttatg tgttttsgtc tggaaaacca agtgtcccag cagcatgact      60
gaacatcact cacttcccct acttgatcta caaggccaac gccgagagcc cagaccagga      120
ttccaaacac actgcacgag aatattgtgg atccgctgtc aggttaagtgt ccgtcactga      180
cccaracgct gttacgtggc acatgactgt acagtgccac gtaacagcac tgtacttttc      240
tcccatgaac agttacctgc catgtatcta catgattcag aacattttga acagttaatt      300
ctgacacttg aataatccca tcaaaaaccg taaaatcact ttgatgtttg taacgacaac      360
atagcatcac ttacgacag aatcatctgg aaaaacagaa caacgaatac atacatctta      420
aaaaatgctg ggggtgggcca ggcacagctt cacgcctgta atcccagcac tttgggaggg      480
ttaagcgggt g                                         491

```

```

<210> 34
<211> 521
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(521)
<223> n = A,T,C or G

```

```

<400> 34
tggggcggaagaagaagccaagg gccaaggagc tgggtgcggca gctgcagctg gaggccyagg      60
agcagaggaa gcagaagaag cggcagagtg tgtcgggcct gcacagatac cttcacttgc      120
tggatggaaa tgaaaattac ccgtgtcttg tggatgcaga cgggtgatgtg atttccttcc      180
caccaataac caacagttag aagacaaagg ttaagaaaac gacttctgat ttgtttttgg      240
aagtaacaag tgccaccagt ctgcagattt gcaaggatgt catggatgcc ctcattctga      300
aaatggcaag aaatgaaaaa gtacacttta gaaaataaag aggaaggatc actctcagat      360
actgaagccg atgcagtctc tggacaactt ccagatccca caacgaatcc cagtgtctga      420
aaggacgggc ccttccttct ggtgggtgga cangtcccgg tggatgatct tggaanggaa      480
cctgaangtg gtgtaccccg tccaaggccg accttgggcca c                                         521

```

```

<210> 35
<211> 161
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(161)
<223> n = A,T,C or G

```

```

<400> 35
tcccgcgctc gcagggcncg tgccacctgc cygtccgccc gctcgctcgc tgcgccgccc      60
cgccgcgctg ccgaccgyca gcatgctgcc gagagtgggc tgccccgcgc tgccgctgcc      120
gccgcgcccg ctgctgccgc tgctgccgct gctgctgctg c                                         161

```

```

<210> 36
<211> 341
<212> DNA
<213> Homo sapien

```

```

<400> 36
ggcgggtagg catggaactg agaagaacga agaagctttc agactacgtg gggaagaatg      60
aaaaaaccaa aattatcgcc aagattcagc aaaggggaca gggagctcca gccgagagc      120
ctattattag cagtgaggag cagaagcagc tgatgctgta ctatcacaga agacaagagg      180

```

```

agctcaagag attggaagaa aatgatgatg atgcctatatt aaactcacca tgggcgagata 240
acactgcttt gaaaagacat ttcatggag tgaaagacat aaagtggaga ccaagatgaa 300
gttcaccagc tgatgacact tccaaagaga ttagctcacc t 341

```

```

<210> 37
<211> 521
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(521)
<223> n = A,T,C or G

```

```

<400> 37
tctgaagggtt aaatgtttca tctaaatagg gataatgrta aacacctata gcatagagtt 60
gtttgagatt aaatgagata atacatgtaa aattatgtgc ctggcataca gcaagattgt 120
tgttgttgtt gatgatgatg atgatgatga taatattttt ctatccccag tgcacaactg 180
cttgaaccta ttagataatc aatacatgtt tcttgaactg agatcaattt ccccatgttg 240
tctgactgat gaagccctac attttcttct agaggagatg acatttgagc aagatcttaa 300
agaaaatcag atgccttcac ctgaccactg cttggtgatc ccatggcact ttgtacatct 360
ctccattagc tctcatctca ccagcccatc attattgtat gtgctgcctt ctgaagcttg 420
cagctggcta ccatcmggtg gaataaaaat catcctttca taaaatagtg accctccttt 480
tttattttgca tttcccaaag ccaagcaccg tggganggta g 521

```

```

<210> 38
<211> 461
<212> DNA
<213> Homo sapien

```

```

<400> 38
tatgaagaag ggaaaagaag ataattttgtg aaagaaatgg gtccagttac tagtctttga 60
aaagggtcag tctgtagctc ttcttaatga gaataggcag ctttcagttg ctgagggtca 120
gatttcctta gtggtgtatc taatcacagg aaacatctgt ggttccctcc agtctctttc 180
tgggggactt gggcccaactt ctcatctcat ttaattagag gaaatagaac tcaaagtaca 240
atttactgtt gtttaacaat gccacaaaga catggttggg agctatttct tgatttgtgt 300
aaaatgctgt ttttgtgtgc tcataatggt tccaaaaatt ggggtgctggc caaagagaga 360
tactgttaca gaagccagca agaagacctc tggtcattca ccccccgagg gatatcagga 420
attgactcca gtgtgtgcaa atccagtttg gcctatcttc t 461

```

```

<210> 39
<211> 769
<212> DNA
<213> Homo sapien

```

```

<400> 39
tgaggggactg attggtttgc tctctgctat tcaattcccc aagcccaactt gttcctgcag 60
cgtctctctt ctcatctcct ttagttgtac cctctctttc atctgagacc tttccttctt 120
gatgtgcctt tttctctctt ttgctttttc tgatgttctg ctgagcatgt tctgggtgct 180
tctcatctgc atcatctcct tcagatgctg tagcttcttc ctctctcttc tgctctcttt 240
tctttttctt ttttttgggg ggcttgcctc ctgactgcag ttgaggggcc ccagggctct 300
ggcctttgat acgagccagg aaggcctgct cctgggcctc taggcgagca agcttggcct 360
tcattgtgat cccaagacgg gcagccttgt gtgctgttcg cccctcacag gcttggagca 420
gcatctcacc agtcagaatc tttggggact tggacccttg gttgtcgtca tcaactgcagc 480
tctccaagtc tttgtttggc ttctctccac ctgaagtcaa ttagccatc ttcacaaact 540

```


tctgatacag	caagttgggc	ttgggatgat	tataacgggt	ggtctcctta	gaaaggctcc	600
ttatctgtac	tccatcctgc	ccagtttcca	ctaccaagtt	ggccgcagtc	ttgttgaaga	660
gctcattcca	ccagtgggtt	gtgaactcct	tggcagggtc	atgtcctacc	ccatgagtgt	720
cttgcttcag	ygtcacctg	agagcctgag	tgataccatt	ctccttccg		769

<210> 40

<211> 292

<212> DNA

<213> Homo sapien

<400> 40

gacaacatga	aataaatcct	agaggacaaa	attaaactca	atagagtgtg	gtctagttaa	60
aaactcgaaa	aatgagcaag	tctggtggga	gtggaggaag	ggctatacta	taaatccaag	120
tgggcctcct	gatcttaaca	agccatgctc	attatacaca	tctctgaact	ggacatacca	180
cctttacgca	ggaaacagg	cttggaactt	ctaagggaag	ttaacatgca	ccacccacat	240
ctaacctacc	tgccgggtag	gtacccatccc	tgcttcgctg	aaatcagtgc	tc	292

<210> 41

<211> 406

<212> DNA

<213> Homo sapien

<400> 41

ttggaattaa	ataaacctgg	aacagggaag	gtgaaagttg	gagtgagatg	tcttccatat	60
ctataccttt	gtgcacagtt	gaatgggaac	tgtttgggtt	tagggcatct	tagagttgat	120
tgatggaaaa	agcagacagg	aactggtggg	aggtcaagtg	gggaagttgg	tgaatgtgga	180
ataacttacc	tttgtgctcc	acttaaacca	gatgtgttgc	agctttcctg	acatgcaagg	240
atctacttta	attccacact	ctcattaata	aattgaataa	aagggaatgt	tttggcacct	300
gatataatct	gccaggctat	gtgacagtag	gaaggaaatg	tttcccctaa	caagcccaat	360
gcactgggtct	gactttataa	attattttaat	aaaatgaact	attatc		406

<210> 42

<211> 381

<212> DNA

<213> Homo sapien

<400> 42

aaactggacc	tgcaacagg	acatgaattt	actgcarggt	ctgagcaagc	tcagcccctc	60
tacctcagg	ccccacagcc	atgactacct	cccccaggag	cgggaggggtg	aagggggcct	120
gtctctgcaa	gtggagccag	agtggaggaa	tgagctctga	agacacagca	cccagccttc	180
tcgcaccagc	caagccttaa	ctgcctgcct	gaccttgaac	cagaacccag	ctgaactgcc	240
cctccaagg	acaggaaggc	tgggggagg	agttttacaac	ccaagccatt	ccaccccctc	300
ccctgctggg	gagaatgaca	catcaagctg	ctaacaattg	ggggaagggg	aaggaagaaa	360
actctgaaaa	caaaatcttg	t				381

<210> 43

<211> 451

<212> DNA

<213> Homo sapien

<400> 43

catgcgtttc	accactgttg	gccaggctgg	tctcgaactc	ctggcctcaa	gcaatccacc	60
cgctcagcc	tccaaaagt	ctgggattac	agatgtgagc	catggcacca	tgccaaaagg	120
ctatatctct	ggctctgtgt	ttccgagact	gcttttaate	ccaacttctc	tacatttaga	180
ttaaaaaata	ttttattcat	ggtcaatctg	gaacataatt	actgcatctt	aagtittccac	240

tgatgtatat	agaaggctaa	aggcacaatt	tttatcaaat	ctagtagagt	aaccaaacat	300
aaaatcatta	attactttca	acttaataac	taattgacat	tcttcaaaaag	agctgttttc	360
aatcctgata	ggttctttat	tttttcaaaa	tatatttgcc	atgggatgct	aatttgcaat	420
aaggcgcata	atgagaatac	cccaaactgg	a			451

<210> 44

<211> 521

<212> DNA

<213> Homo sapien

<400> 44

ggtggacccc	cagggactgg	aaagacactt	cttgcccag	ctgtggcggg	agaagctgat	60
gttccttttt	attatgcttc	tggatccgaa	tttgatgaga	tgtttgtggg	tgtgggagcc	120
agccgtatca	gaaatctttt	tagggaagca	aaggcgaatg	ctccttgtgt	tatatttatt	180
gatgaattag	attctgttgg	tgggaagaga	attgaatctc	caatgcatcc	atattcaagg	240
cagaccataa	atcaacttct	tgctgaaatg	gatggtttta	aaoccaaata	aggagttatc	300
ataataggag	ccacaaactt	cccagaggca	ttagataatg	ccttaatacc	gtcctggctg	360
ttttgacatg	caagttacag	ttccaaggcc	agatgtaaaa	ggtcgaacag	aaattttgaa	420
atggtatctc	aataaaaataa	agtttgatca	atcccgttga	tccagaaatt	atagcctcga	480
ggtactggtg	gcttttccgg	aagcagagtt	gggagaatct	t		521

<210> 45

<211> 585

<212> DNA

<213> Homo sapien

<400> 45

gcctacaaca	tccagaaaga	gtctaccctg	cacctggtgc	tscgtctcag	aggtgggatg	60
cagatcttcg	tgaagaccct	gactggtaag	accatcactc	tcgaagtgga	gccgagtgac	120
accatygaga	acgtcaaagc	aaagatccar	gacaagggaag	gcrtycctcc	tgaccagcag	180
aggttgatct	ttgccggaaa	gcagctggaa	gatggdcgca	ccctgtctga	ctacaacatc	240
cagaaagagt	cyaccctgca	cctgggtgctc	cgtctcagag	gtgggatgca	ratcttcgtg	300
aagaccctga	ctggtaagac	catcaccttc	gaggtggagc	ccagtgcacac	catcgagaat	360
gtcaaggcaa	agatccaaga	taaggaaggc	atccctcctg	atcagcagag	gttgatcttt	420
gctgggaaac	agctggaaga	tggacgcacc	ctgtctgact	acaacatcca	gaaagagtcc	480
actctgcact	tggtcctgcg	cttgaggggg	ggtgtctaag	tttccccctt	taagggtttcm	540
acaaatttca	ttgcactttc	ctttcaataa	agttgttgca	ttccc		585

<210> 46

<211> 481

<212> DNA

<213> Homo sapien

<400> 46

gaactggggc	ctgagcccaa	gtcatgcctt	gtgtccgcat	ctgccgtgtc	acctctgtkc	60
ctgccccctc	ccccctccctc	ctggctcttc	gagccagcac	catctccaaa	tagcctattc	120
cttcttgcaa	atcacacaca	catgcggggc	acacatacct	gctgccctgg	agatggggaa	180
gtaggagaga	tgaatagagg	cccatacatt	gtacagaagg	aggggcaggt	gcagataaaa	240
gcagcagacc	cagcggcagc	tgaggtgcat	ggagcacggg	tggggccggc	attgggctga	300
gcacctgatg	ggcctcatct	cgtgaatcct	cgaggcagcg	ccacagcaga	ggagttaagt	360
ggcacctggg	ccgagcagag	caggagactg	agggtcagag	tggaggctaa	gctgccctgg	420
aactcctcaa	tcttgccctgc	cccctagtat	gaagccccct	tcttgcacct	acaattcctg	480
a						481

<210> 47

<211> 461
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(461)
 <223> n = A,T,C or G

<400> 47

atggatctta	ctttgccacc	caggttgag	tgcatgtctg	caatcttggc	tcaactgcagc	60
cttaacctcc	caggctcaag	ctatcctcct	gccaaagcct	tccacatagc	tgggactaca	120
ggtacacngc	caccacaccc	agctaaaatt	tttgtatttt	ttgtagagac	gggatctcgc	180
cacgttgccc	aggctggtcc	catcctgacc	tcaagcagat	ctgcccacct	cagcccccca	240
acgtgctagg	attacaggcg	tgagccaccg	caccagcct	ttgttttgct	tttaatggaa	300
tcaccagttc	ccctccgtgt	ctcagcagca	gctgtgagaa	atgctttgca	tctgtgacct	360
ttatgaagg	gaacttccat	gctgaatgag	ggtaggatta	catgctcctg	tttccgggg	420
gtcaagaaag	cctcagactc	cagcatgata	agcagggtga	g		461

<210> 48
 <211> 571
 <212> DNA
 <213> Homo sapien

<400> 48

ataggggctt	taaggaggga	attcagggtc	aatgaggtcg	taaggccagg	gctcttatcc	60
agtaagactg	gggtccttag	atgagaaaga	gacacccgag	gtccttctct	ctgccgtgtg	120
aggatgcac	aagaaggcgg	ccgtctgcaa	gcgaaggaga	ggccgcacca	gaaaccgaca	180
ccttcattct	ggacttgag	cctctagaac	tgagaaaata	actgtctgtt	ggtaagcca	240
cccagtttgt	agtattctct	tatggcttcc	taagcagact	aacaaacaaa	cacccaaaat	300
taactgatgg	cttcgctgtc	ttctgtaaaa	attgctatga	gagaactttt	cactcactgt	360
tttgagttt	ctccctcagt	ccctggttct	ttcttctcac	ataatcccaa	tttcaattta	420
tagttcatgg	cccaggcaga	gtcattcatc	acggcatctc	ctgagctaaa	ccagcacctg	480
ctctgctcac	ttcttgactg	gctgetcatc	atcagccctc	ttgcagagat	ttcatttcct	540
cccgtgccag	gtacttcacg	caccaagctc	a			571

<210> 49
 <211> 511
 <212> DNA
 <213> Homo sapien

<400> 49

ggataatgaa	gttggtttat	ttagcttgga	caaaaaggca	tattcctcta	ttttcttata	60
caacaaatat	ccccaaaata	aagcaagcat	atatatcttg	aatgtgtaat	aatccagtga	120
taaacaagag	cagtacttta	aaagaaaaaa	aaatatgtat	ttctgtcagg	ttaaaatgag	180
aatcaaaacc	atttactctg	ctaactcatt	atTTTTTgct	ttctTTTTgg	ttaagagagg	240
caatgcaata	cactgaaaaa	ggtttttatc	ttatctggca	ttggaattag	acatattcaa	300
accccagccc	ccattttcaa	actttaagac	cacaaacaag	taatttactt	ttctgaacat	360
tggttttttc	tggaaaatgg	gaattataaa	atagactttg	cagactctta	tgagattaaa	420
taagataatg	tatgaaattc	tttcttcttt	tttacttctt	tttcttcttt	gagatggagt	480
ctcaccccg	caccagggt	ggagtacagt	g			511

<210> 50
 <211> 561
 <212> DNA

<213> Homo sapien

<400> 50

ccactgcact	ccagcctggg	tgacggagtg	agactctgtc	tcaaaaaaac	aaacaaacaa	60
acaaacaaaa	aactgaaaag	gaaatagagt	tcctctttcc	tcatatatga	atatattatt	120
tcaacagatt	gttgatcacc	taccatatgc	ttggtattgt	tctaattgct	ggggatacag	180
caagaggttc	tgcagaactt	catggagcat	gaaagtaaat	aaacaaagtt	aatttcaagg	240
ccaggcatgg	ttgctcacac	ctttagtccc	agcacttttg	gaggctgagg	cagggtggatc	300
acttgggccc	aggagttaa	ggctgcagtg	agccaagatt	gtgccactac	tctccaggct	360
gggcaacaga	gcaagaccct	gtctcagggg	gaacaaaaag	ttaatttcag	attttgttaa	420
gtgctgtaaa	ggaagtaaat	aggttgatat	tcaagagagc	acctgaaggc	caggcgtggt	480
ggctcacgcc	tgtggtctaa	cgctttggga	agcccagagc	ggcggatcac	aaggtcagga	540
gaattttggc	caggcatggt	g				561

<210> 51

<211> 451

<212> DNA

<213> Homo sapien

<400> 51

agaatccatt	tattggggtt	taaactagtt	acacaactga	aatcagtttg	gcactacttt	60
atacagggat	tacgcctgtg	tatgccgaca	cttaataact	gtaccaggac	cactgctgtg	120
cttaggtctg	tattcagtca	ttcagcatgt	agataactaaa	aataactgtg	agtgttcctt	180
taaggaagac	tgtacagggg	gtgttgcaag	atgacattca	ccaattttgtg	aattatttca	240
acccagaaga	tacctttcac	tctataaact	tgtcataggg	aaacatgtgg	tgttagcatt	300
gagagatgca	cacaaaaatg	ttacataaaa	gttcagacat	tctaatagata	agtgaactga	360
aaaaaaaaaa	aaccccatat	ctcaattttt	gtaacaagat	aaagaaaata	atttaaaaaac	420
acaaaaaatg	gcattcagtg	ggtacaaagc	c			451

<210> 52

<211> 682

<212> DNA

<213> Homo sapien

<400> 52

caaatatttta	atataaatct	ttgaaacaag	ttcaqakgaa	ataaaaaatca	aagttttgcaa	60
aaacgtgaag	attaacttaa	ttgtcaaata	ttcctcattg	ccccaaatca	gtattttttt	120
tattttctatg	caaaagtatg	ccttcaaact	gcttaaatga	tatatgatat	gatacacaaa	180
ccagtttttca	aatagtaaag	ccagtcattt	tgcaattgta	agaaataggt	aaaaagattat	240
aagacacctt	acacacacac	acacacacac	acacacacgt	gtgcaccggc	aatgacaaaa	300
aacaattttg	cctctcctaa	aataagaaca	tgaagaccct	taattgctgc	caggagggaa	360
cactgtgtca	cccctcccta	caatccaggt	agtttccttt	aatccaatag	caaactctggg	420
catatttgag	aggagtgatt	ctgacagcca	csgttgaaat	cctgtgggga	accattcatg	480
tccaccact	ggtgccctga	aaaaatgcc	ataatttttc	gtcccaactt	ctgctgctgt	540
ctcttcacac	tcctcacata	gacccagac	ccgctggccc	ctggctgggc	atcgattgct	600
tggtagagca	agtcataagg	ctcgtctttg	acgtcacaga	agcgatacac	caaattgcct	660
ggtcggtcac	tgtcataacc	ag				682

<210> 53

<211> 311

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(311)

<223> n = A,T,C or G

<400> 53

tttgacttta	gtaggggtct	gaactattta	ttttactttg	ccmgtaatat	ttaraccyta	60
tatatctttc	attatgccat	cttatcttct	aatgbcaagg	gaacagwtgc	taamctggct	120
tctgcattwa	tcacattaaa	aatggctttc	ttggaaaatc	ttcttgatat	gaataaagga	180
tcttttavag	ccatcattta	aagcmggnnt	ctctccaaca	cgagtctgct	sasgggggk	240
gagctgtgaa	ctctggctga	aggctttccc	atacactg	caatgacmtg	gtttctgacc	300
agbgtgagtt	a					311

<210> 54

<211> 561

<212> DNA

<213> Homo sapien

<400> 54

agagaagccc	cataaatgca	atcagtgtgg	gaaggccttc	agtcagagct	caagcctttt	60
cctccatcat	cgggttcata	ctggagagaa	accctatgta	tgtaatgaat	gcggcagagc	120
ctttggtttt	aactctcatc	ttactgaaca	cgtaaggatt	cacacaggag	aaaaacccta	180
tgtttgtaat	gagtgcggca	aagcctttcg	tcggagttcc	actcttggtc	agcatcgaag	240
agttcacact	ggggagaagc	cctaccagtg	cgttgaatgt	gggaaagctt	tcagccagag	300
ctcccagctc	accctacatc	agccgagttc	acactggaga	gaagccctat	gactgtggtg	360
actgtgggaa	ggccttcagc	cggaggtcaa	ccctcattca	gcacagaaa	gttcacagcg	420
gagagactcg	taagtgcaga	aaacatggtc	cagcctttgt	tcattggctcc	agcctcacag	480
cagatggaca	gattcccact	ggagagaagc	acggcagaac	ctttaaccat	ggtgcaaate	540
tcattctgcg	ctggacagtt	c				561

<210> 55

<211> 811

<212> DNA

<213> Homo sapien

<400> 55

gagacaggg	ctcactttgt	cacccaggct	ggaatgcagt	ggtgcgatct	tacgtagctc	60
actgcagccc	tgacctcctg	gactcaaaca	attctcctgc	ctcagccctg	caagtaagctg	120
ggactgtggg	tgcattgccac	catgcctggc	taactttttg	agttttttgta	aagatgggg	180
tttgccatgt	tgcacatgct	ggtcttgaac	tcctgagctc	aaacgatctg	cccacctcgg	240
cctcccagaa	tggtgggatt	acaggggtaa	accaccacgc	ctggcccat	tagggatttc	300
ttagcatcca	cttgctcact	gagattaatc	ataagagatg	ataagcactg	gaagaaaaaa	360
atttttacta	ggctttggat	atttttttcc	tttttcagct	ttatacagag	gattggatct	420
ttagttttcc	tttaactgat	aataaaacat	tgaaaggaaa	taagtttacc	tgagattcac	480
agagataacc	ggcatcactc	ccttgctcaa	ttccagtctt	taccacatca	attattttca	540
gaggtgcagg	ataaaggcct	ttagtctgct	ttcgcacttt	ttcttccact	tttttgtaaa	600
cctgttgcc	gacaaatgga	attgacagcg	tatgccatga	ctattccatt	tgtcaggcat	660
acgctgtcaa	tttttccacc	aatcccttgt	ctctcttttg	agagatcttc	ttatcagcta	720
gtcctttggc	aaaagtaatt	gcaacttctt	ctaggtattc	tattgtccgt	tccactgggtg	780
gaacccctgg	gaccaggact	aaaacctcca	g			811

<210> 56

<211> 591

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(591)

<223> n = A,T,C or G

<400> 56

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tcacagagac	caaaatagag	cggctttctg	gtggaacgca	tggcagtcac	aggacaaaat	120
acaaaactag	ggggctctgt	cttctcatac	atcatacaat	tttcaagtat	tttttttatg	180
tacaaagagc	tactctatct	gaaaaaaaaa	taaaaaataa	atgagacaag	atagtttatg	240
catcctagga	agaaagaatg	ggaagaaaga	acggggcagt	tgggtacaga	ttcctgtccc	300
ctgttcccag	ggaccactac	cttcctgcca	ctgagttccc	ccacagcctc	acccatcatg	360
tcacagggca	agtgccaggg	taggtgggga	ccagtggaga	caggaaccag	caacatactt	420
tggcctggaa	gataaggaga	aagtctcaga	aacacactgg	tgggaagcaa	tcccacnggc	480
cgtgccccan	gagcttccca	cctgctgctg	gctccctggg	tggctttggg	aacagcttgg	540
gcaggccctt	ttgggtgggg	nccaactggg	cctttggggc	cgtgtggaaa	g	591

<210> 57

<211> 481

<212> DNA

<213> Homo sapien

<400> 57

aaacattgag	atggaatgat	agggtttccc	agaatcaggt	ccatatttta	actaaatgaa	60
aattatgatt	tatagccttc	tcaaatacct	gccatacttg	atatctcaac	cagagctaata	120
tttacctctt	tacaaattaa	ataagcaagt	aactggatcc	acaatttata	atacctgtca	180
atTTTTtctg	tattaaacct	ctatcatagt	ttaagcctat	tagggtagctt	aatccttaca	240
aataaacagg	tttaaaatca	cctcaatagg	caactgccct	tctggttttc	ttctttgact	300
aaacaatctg	aatgcttaag	attttccact	ttgggtgcta	gcagtacaca	gtgttacact	360
ctgtattcca	gacttcttaa	attatagaaa	aaggaatgta	cactttttgt	attctttctg	420
agcagggccg	ggaggcaaca	tcattctacca	tggtagggac	ttgtatgcat	ggactacttt	480
a						481

<210> 58

<211> 141

<212> DNA

<213> Homo sapien

<400> 58

actctgtcgc	ccaggctgga	gcccabtggm	gcgatctcga	ctccctgcaa	gctmcgcctc	60
acaggwtcat	gccattctcc	tgcctcagca	tctggagtag	ctgggactac	aggcgccagc	120
caccatgccc	agctaatttt	t				141

<210> 59

<211> 191

<212> DNA

<213> Homo sapien

<400> 59

accttaaaga	cataggagaa	tttatactgg	gagagaaagc	ttacaaatgt	aaggtttctg	60
acaagacttg	ggagtgattc	acacctggaa	caacatactg	gacttcacac	tggabagaaa	120
ccttacaagt	gtaatgagtg	tggcaaagcc	tttggaagc	agtcaacact	tattcaccat	180
caggcaattc	a					191

<210> 60

<211> 480

<212> DNA

<213> Homo sapien

<400> 60

agtcaggatc	atgatggctc	agtttccac	agcgatgaat	ggagggccaa	atatgtgggc	60
tattacatct	gaagaacgta	ctaagcatga	taaacagttt	gataacctca	aaccttcagg	120
agggttacata	acagggtgatc	aagcccgtac	ttttttccta	cagtcaggtc	tgccggcccc	180
ggtttttagct	gaaatatggg	ccttatcaga	tctgaacaag	gatgggaaga	tggaccagca	240
agagttctct	atagctatga	aactcatcaa	gttaaagttg	cagggccaac	agctgcctgt	300
agtcctccct	cctatcatga	aacaaccccc	tatgttctct	ccactaatct	ctgctcgttt	360
tgggatggga	agcatgccca	atctgtccat	tcatcagcca	ttgcctccag	ttgcacctat	420
agcaacaccc	ttgtcttctg	ctacttcagg	gaccagtatt	cctccctaata	gatgcctgct	480

<210> 61

<211> 381

<212> DNA

<213> Homo sapien

<400> 61

ctttcgattt	ccttcaattt	gtcacgtttg	attttatgaa	gttgttcaag	ggctaactgc	60
tgtgtattat	agctttctct	gagttccttc	agctgattgt	taaataaatc	catttctgag	120
agcttagatg	cagtttcttt	ttcaagagca	tctaattgtt	ctttaagtct	ttggcataat	180
tcttcccttt	ctgatgactt	tctatgaagt	aaactgatcc	ctgaatcagg	tgtgttactg	240
agctgcatgt	ttttaattct	ttcgtttaat	agctgcttct	cagggaccag	atagataagc	300
ttattttgat	attccttaag	ctcttggtga	agttgttcga	ttcccataat	ttccagggtca	360
cactgggttat	cccaaacttc	t				381

<210> 62

<211> 906

<212> DNA

<213> Homo sapien

<400> 62

gtggaggtga	aacggaggca	agaaaggggg	ctacctcagg	agcgaggggac	aaagggggcg	60
tgaggcacct	aggccgcggc	accccggcga	caggaagccg	tcctgaaccg	ggctaccggg	120
taggggaagg	gcccgcgtag	tcctcgcagg	gccccagagc	tggagtcggc	tcacagcccc	180
cgggcgcgtc	gcttctcaat	tcctggacct	ccccggcgcc	cgggcctgag	gactggctcg	240
gcggagggag	aagaggaaac	agacttgagc	agctccccgt	tgtctcgcaa	ctccactgcc	300
gaggaactct	catttcttcc	ctcgtccctt	cacccccac	ctcatgtaga	aaggtgctga	360
agcgtccgga	gggaagaaga	acctgggcta	ccgtcctggc	cttcccmccc	ccttccccgg	420
gcgctttggg	gggcgtggag	ttgggggttg	gggggtgggt	gggggttctt	ttttggagtg	480
ctggggaact	tttttccctt	cttcagggtca	ggggaaaagg	aatgcccaat	tcagagagac	540
atgggggcaa	gaaggacggg	agtggaggag	cttctggaac	tttgacggcg	tcacggggag	600
gcggcagctc	taacagcaga	gagcgtcacc	gcttggtatc	gaagcacaag	cggcataagt	660
ccaaacactc	caaagacatg	gggttggtga	ccccgaagc	agcatccctg	ggcacagtta	720
tcaaaccttt	ggtggagtat	gatgatatac	gctctgattc	cgacaccttc	tccgatgaca	780
tggccttcaa	actagaccga	agggagaacg	acgaacgtcg	tggatcagat	cggagcgacc	840
gcctgcacaa	acatcgtcac	caccagcaca	ggcgttcccc	ggacttacta	aaagctaaac	900
agaccg						906

<210> 63

<211> 491

<212> DNA

<213> Homo sapien

<400> 63

gacatgtttg	cctgcagggg	accagagaca	atgggattag	ccagtgtctca	ctgttcttta	60
tgcttccaga	gaggatggg	acagctctca	ggtcagaatc	caggctgaga	aggccatgct	120
ggttgggggc	ccccggaagc	acggtcggga	tcctccctgg	catcagcgta	gacccgctgc	180
tcaggcttgg	ggtaccaaac	tcattgctctg	tactgttttg	gccccatgcg	gtgagaggaa	240
aacctagaaa	aagattggtc	gtgctaagga	atcagctgcc	ccctcatcct	ccgcatccaa	300
tgctggtgac	aacatattcc	ctctcccagg	acacagactc	ggtgactcca	cactgggctg	360
agtggcctct	ggaggctcgt	ggcctaaggc	agggctccgt	aaggctgatc	ggctgaactg	420
ggtaggggtga	gggtttctga	cccttcgctt	cccatcccat	aaccgctgtc	aatgagctca	480
cactgtggtc	a					491

<210> 64

<211> 511

<212> DNA

<213> Homo sapien

<400> 64

gatggcatgg	tcgttgctaa	tgtgcctgct	gggatggagc	acttcctcct	gtgagcccag	60
gggacccgcc	tgtccctgga	gcttggggca	aggaggggaag	agtgatacca	ggaagggtgg	120
gctgcagcca	ggggccagag	tcagttcagg	gagtggtcct	cggccctcaa	agtcctccg	180
gggactgctc	aggagtgatg	gtgccctgga	gtttgcccc	acttccttgg	ccaccctgga	240
aggtgcctgg	ctgctccagg	cctctaggct	gggctgatgg	gtttctccag	gacacaagta	300
tcattaaagc	caccctctcc	tcagcttgct	aggccgcaca	tgtgggacag	gctgtgctca	360
caacccccctc	gcctgccctg	ccctccatca	ggaggagcca	gtggaacctt	cggaaagctc	420
ccagcatctc	agcagccctc	aaaagtcgtc	ctggggcaag	ctctggttct	cctgactgga	480
ggtcatctgg	gcttggcctg	ctctctctcg	c			511

<210> 65

<211> 394

<212> DNA

<213> Homo sapien

<400> 65

taaaaaagtg	taacaaaggt	ttattttagac	tttcttcattg	ccccagatc	caggatgtct	60
atgtaaaccg	ttatcttaca	aagaaagcac	aatatttggt	ataaactaag	tcagtgactt	120
gcttaactga	aatagcgtcc	atccaaaagt	gggtttaagg	taaaactacc	tgacgatatt	180
ggcggggatc	ctgcagtttg	gactgcttgc	cgggtttgtc	cagggttccg	ggtctgttct	240
tggcactcat	ggggacaggc	atcctgctcg	tctgtggggc	ccgctggag	cccttacgtg	300
aagctgaagg	tatcgaccst	agggggctct	agggcagtgg	gaccttcac	cggaaactaac	360
aagggtcggg	gagaggcctc	ttgggctatg	tggg			394

<210> 66

<211> 359

<212> DNA

<213> Homo sapien

<400> 66

caagcgttcc	tttatggatg	taaattcaaa	cagtcattgct	gagccatccc	gggctgacag	60
tcacgttwaa	gacactagg	cgggcgccac	agtgccaccc	aaggagaaga	agaatttgga	120
atttttccat	gaagatgtac	ggaaatctga	tgttgaatat	gaaaatggcc	cccaaagtga	180
attccaaaag	gttaccacag	gggctgtaag	acctagtac	cctcctaagt	gggaaagagg	240
aatggagaat	agtatttctg	atgcatcaag	aacatcagaa	tataaaactg	agatcataat	300
gaaggaaaaat	tccatatcca	atatgagttt	actcagagac	agtagaaact	attcccagg	359

<210> 67

<211> 450

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(450)

<223> n = A,T,C or G

<400> 67

taggaataac	aaatgtttat	tcagaaatgg	ataagtaata	cataatcacc	cttcatctct	60
taatgccct	tcctctcctt	ctgcacagga	gacacagatg	ggtaacatag	aggcatggga	120
agtggaggag	gacacaggac	tagcccacca	ccttctcttc	ccggtctccc	aagatgactg	180
cttatagagt	ggaggaggca	aacagggtccc	ctcaatgtac	cagatgggtca	cctatagcac	240
cagctccaga	tggccacgtg	gttgacgtg	gactcaatga	aactctgtga	caaccagaag	300
atacctgctt	tgggatgaga	gggaggataa	agccatgcag	ggaggatatt	taccatccct	360
accctaagca	cagtgcgaag	agtgcagccc	cggctccag	tacctgaaaa	accaaggcct	420
actgnctttt	ggatgctctc	ttggggccacg				450

<210> 68

<211> 511

<212> DNA

<213> Homo sapien

<400> 68

aagcctcctg	ccctggaaat	ctggagcccc	ttggagctga	gctggacggg	gcaggaggag	60
gctgagaggc	aagaccgtct	ccctcctgct	gcagctgctt	ccccagcagc	cactgctggg	120
cacagcagaa	acgccagcag	agaaaaatggg	agccgagagt	ccttagccct	ggagctgagg	180
ctgcctctgg	gctgacccgc	tggctgtacg	tggccagaac	tgggggttggc	atctggcatc	240
cattttgaggc	caggggtggag	gaaaggggagg	ccaacagagg	aaaacctatt	cctgctgtga	300
caacacagcc	cttgctccac	gcagcctaag	tgcagggagc	gtgatgaagt	caggcagcca	360
gtcggggagg	acgaggtaac	tcagcagcaa	tgtcaccttg	tagcctatgc	gctcaatggc	420
ccggaggggc	agcaaccccc	cgcacacgtc	agccaacagc	agtgcctctg	caggcaccaa	480
gagagcgatg	atggacttga	gcgccgtgtt	c			511

<210> 69

<211> 511

<212> DNA

<213> Homo sapien

<400> 69

gtttggcaga	agacatgttt	aataacattt	tcatatttaa	aaaatacagc	aacaattctc	60
tatctgtcca	ccatcttgcc	ttgcccttcc	tggggctgag	gcagacaaaag	gaaaggtaat	120
gaggttaggg	ccccaggcg	ggctaagtgc	tattggcctg	ctcctgctca	aagagagcca	180
tagccagctg	ggcacggccc	cctagcccct	ccaggttgct	gaggcggcag	cgggtggtaga	240
gttcttcact	gagccgtggg	ctgcagtctc	gcaggagagaa	cttctgcacc	agccctggct	300
ctacggcccc	aaagaggtgg	agccctgaga	accggaggaa	aacatccatc	acctccagcc	360
cctccagggc	ttcctcctct	tcttgccctg	ccagttcacc	tgccagccgg	gctcggggccg	420
ccaggtagtc	agcgtttag	aagcagccct	ccgcagaagc	ctgccgggtca	aatctccccg	480
ctataggagc	ccccggggag	gggtcagcac	c			511

<210> 70

<211> 511

<212> DNA

<213> Homo sapien

<400> 70

caagttgaac	gtcaggcttg	gcagaggttg	agtgtagatg	aaaacaaagg	tgtgattatg	60
aagaggatgt	gagtcctttg	ggtgtaggag	agaaaggctg	ttgagcttct	atttcaagat	120
acttttacct	gtgcaaaaag	cacattttcc	acctccttct	catggcattt	gtgtaagggt	180
agtatgattc	ctattccatc	tgcatttttag	aggtgaagaa	taacgtacaa	gggattcagt	240
gattagcaag	ggacccctca	ctaagtgttg	atggagttag	gacagagctc	agctgtttga	300
atctcagagc	ccaggcagct	ggagctgggt	aggatcctgg	agctggcact	aatgtgaggt	360
gcattccctc	caaccaggc	tcagatccgg	aacctgaccg	tgctgacccc	cgaaggggag	420
gcagggctga	gctggcccgt	tgggctccct	gctcctttca	caccacactc	tcgctttgag	480
gtgctgggct	gggactactt	cacagagcag	c			511

<210> 71

<211> 511

<212> DNA

<213> Homo sapien

<400> 71

tggcctgggc	aggattggga	gagaggtagc	tacccggatg	cagtcctttg	ggatgaagac	60
tatagggtat	gaccccatca	tttccccaga	ggtctcgcc	tcctttggtg	ttcagcagct	120
gcccctggag	gagatctggc	ctctctgtga	tttcatcact	gtgcacactc	ctctcctgcc	180
ctccacgaca	ggcttgctga	atgacaacac	ctttgccag	tgcaagaagg	gggtgcgtgt	240
ggtgaactgt	gcccgtggag	ggatcgtgga	cgaaggcgcc	ctgctccggg	ccctgcagtc	300
tggccagtgt	gccggggctg	cactggacgt	gtttacggaa	gagccgccac	gggaccgggc	360
cttggtggac	catgagaatg	tcatcagctg	tccccacctg	ggtgccagca	ccaaggaggc	420
tcagagccgc	tgtggggagg	aaattgctgt	tcagttcgtg	gacatggtga	aggggaaatc	480
tctcacgggg	gttgtgaatg	cccaggccct	t			511

<210> 72

<211> 2017

<212> DNA

<213> Homo sapien

<400> 72

agccagatgg	ctgagagctg	caagaagaag	tcaggatcat	gatggctcag	tttcccacag	60
cgatgaatgg	agggccaaat	atgtgggcta	ttacatctga	agaacgtact	aagcatgata	120
aacagtttga	taacctcaaa	ccttcaggag	gttacataac	aggtgatcaa	gcccgtactt	180
ttttcctaca	gtcaggctctg	ccggccccgg	ttttagctga	aatatggggc	ttatcagatc	240
tgaacaagga	tgggaagatg	gaccagcaag	agttctctat	agctatgaaa	ctcatcaagt	300
taaagtgtga	gggccaacag	ctgcctgtag	tcctccctcc	tatcatgaaa	caaccccccta	360
tgttctctcc	actaatctct	gctcgttttg	ggatgggaag	catgcccaat	ctgtccattc	420
atcagccatt	gcctccagtt	gcacctatag	caacaccctt	gtcttctgct	acttcaggga	480
ccagtattcc	tcccctaattg	atgcctgctc	ccctagtgcc	ttctgttagt	acatccctcat	540
taccaaattgg	aactgccagt	ctcattcagc	ctttatccat	tccttattct	tcttcaacat	600
tgcctcatgc	atcatcttac	agcctgatga	tgggaggatt	tggtggtgct	agtatccaga	660
aggcccagtc	tctgattgat	ttaggatcta	gtagctcaac	ttcctcaact	gcttccctct	720
cagggaactc	acctaagaca	gggacctcag	agtgggcagt	tcctcagcct	tcaagattaa	780
agtatcggca	aaaattttaat	agtctagaca	aaggcatgag	cggataacct	tcagggttttc	840
aagctagaaa	tgcccttctt	cagtcaaata	tctctcaaac	tcagctagct	actatttgga	900
ctctggctga	catcgatggg	gacggacagt	tgaagactga	agaattttatt	ctggcgatgc	960
acctcactga	catggccaaa	gctggacagc	cactaccact	gacgttgccct	cccagacttg	1020
tccctccatc	tttcagaggg	ggaaagcaag	ttgattctgt	taatggaact	ctgccttcat	1080
atcagaaaac	acaagaagaa	gagcctcaga	agaaactgcc	agttactttt	gaggacaaac	1140
ggaaagccaa	ctatgaacga	ggaaacatgg	agctggagaa	gcgacgccaa	gtgttgatgg	1200
agcagcagca	gagggagggt	gaacgcaaag	cccagaaaaga	gaagggaagag	tgggagcgga	1260
aacagagaga	actgcaagag	caagaatgga	agaagcagct	ggagttggag	aaacgcttgg	1320

agaaacagag	agagctggag	agacagcggg	aggaagagag	gagaaaggag	atagaaagac	1380
gagaggcagc	aaaacaggag	cttgagagac	aacgccgttt	agaatgggaa	agactccgtc	1440
ggcaggagct	gctcagtcag	aagaccaggg	aacaagaaga	cattgtcagg	ctgagctcca	1500
gaaagaaaaa	tctccacctg	gaactggaag	cagtgaatgg	aaaacatcag	cagatctcag	1560
gcagactaca	agatgtccaa	atcagaaaagc	aaacacaaaa	gactgagcta	gaagttttgg	1620
ataaacagtg	tgacctggaa	attatggaaa	tcaaacaact	tcaacaagag	cttaaggaat	1680
atcaaaataa	gcttatctat	ctggctccctg	agaagcagct	attaaacgaa	agaattaaaa	1740
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aaaaggaaga	attatgccaa	agactttaaag	aacaattaga	tgctcttgaa	aaagaaactg	1860
catctaagct	ctcagaaatg	gattcattta	acaatcagct	gaaggaactc	agagaaagct	1920
ataatacaca	gcagttagcc	cttgaacaac	ttcataaaat	caaacgtgac	aaattgaagg	1980
aatcgaag	aaaaagatta	gagcaaaaaa	aaaaaaa			2017

<210> 73

<211> 414

<212> DNA

<213> Homo sapien

<400> 73

atggcagtga	cattcacat	catgggaacc	accttccctt	ttcttcagga	ttctctgtag	60
tggaagagag	caccagtg	tgggctgaaa	acatctgaaa	gtagggagaa	gaacctaaaa	120
taatcagtat	ctcagagggc	tctaagggtgc	caagaagtct	cactggacat	ttaagtgccaa	180
acaaaggcat	actttcggaa	tcgccaagtc	aaaactttct	aactttctgtc	tctctcagag	240
acaagtgaga	ctcaagagtc	tactgcttta	gtggcaacta	cagaaaactg	gtgttaccca	300
gaaaaacagg	agcaattaga	aatgggtcca	atatttcaaa	gctccgcaaa	caggatgtgc	360
tttcctttgc	ccatttaggg	tttcttctct	ttcctttctc	tttattaacc	acta	414

<210> 74

<211> 1567

<212> DNA

<213> Homo sapien

<400> 74

atatctagaa	gtctggagtg	agcaaacaag	agcaagaaac	aaaaagaagc	caaaagcaga	60
aggctccaat	atgaacaaga	taaatctatc	ttcaaagaca	tattagaagt	tgggaaaata	120
attcatgtga	actagacaag	tgtgttaaqa	gtgataagta	aaatgcacgt	ggagacaagt	180
gcactccccg	atctcaggga	cctccccctg	cctgtcacct	ggggagttag	aggacaggat	240
agtgcagtgt	ctttgtctct	gaatttttag	ttatatgtgc	tgtaatgttg	ctctgaggaa	300
gccccctggaa	agtctatccc	aacatatcca	catcttatat	tccacaaatt	aagctgtagt	360
atgtacccta	agacgtctgt	aattgactgc	cacttcgcaa	ctcaggggag	gctgcatttt	420
agtaatgggt	caaatgattc	actttttatg	atgcttccaa	aggtgccttg	gcttctcttc	480
ccaactgaca	aatgccaaag	ttgagaaaaa	tgatcataat	tttagcataa	acagagcagt	540
cggcgacacc	gattttataa	ataaactgag	caccttcttt	ttaaacaaac	aaatgcgggt	600
ttattttctca	gatgatgttc	atccgtgaat	ggtccaggga	aggacctttc	accttgacta	660
tatggcatta	tgatcatcaca	agctctgagg	cttctccttt	ccatcctgag	tggacagcta	720
agacctcagt	tttcaatagc	atctagagca	gtgggactca	gctgggggtga	tttcgcccc	780
catctccggg	ggaatgtctg	aagacaattt	tgttacctca	atgaggaggt	ggaggaggat	840
acagtgtctac	taccaactag	tggataaagg	ccagggatgc	tgctcaacct	cctaccatgt	900
acaggagctc	tccccattac	aactacccaa	tccgaagtgt	caactgtgtc	aggactaaga	960
aacctgggtt	ttgagttaga	aagggcctgg	aaagagggga	gccaacaaat	ctgtctgctt	1020
cctcacatta	gtcatctggca	aataagcatt	ctgtctcttt	ggctgtgccc	tcagcacaga	1080
gagccagaac	tctatcgggc	accaggataa	catctctcag	tgaacagagt	tgacaaggcc	1140
tatgggaaat	gcctgatggg	attatcttca	gcttgttgag	cttctaagtt	tctttccctt	1200
cattctaccc	tgcaagccaa	gttctgtaag	agaaatgcct	gagttctagc	tcagggtttc	1260
ttactctgaa	tttagatctc	cagacccttc	ctggccacaa	ttcaaattaa	ggcaacaaac	1320

atataccttc	catgaagcac	acacagactt	ttgaaagcaa	ggacaatgac	tgcttgaatt	1380
gaggccttga	ggaatgaagc	tttgaaggaa	aagaatactt	tgtttccagc	ccccttccca	1440
cactcttcat	gtgttaacca	ctgccttctc	ggaccttgga	gccacggtga	ctgtattaca	1500
tgttgttata	gaaaactgat	tttagagttc	tgatcgttca	agagaatgat	taaatataca	1560
tttccta						1567

<210> 75
 <211> 240
 <212> DNA
 <213> Homo sapien

<400> 75						
tcgagcggcc	gcccgggcag	gtccttcaga	cttggactgt	gtcacactgc	caggcttcca	60
gggctccaac	ttgcagacgg	cctgttggtg	gacagtctct	gtaatcgcca	aagcaaccat	120
ggaagacctg	ggggaaaaca	ccatggtttt	atccaccctg	agatctttga	acaacttcat	180
ctctcagcgt	gcggagggag	gctctggact	ggatatttct	acctcggccg	cgaccacgct	240

<210> 76
 <211> 330
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(330)
 <223> n = A,T,C or G

<400> 76						
tagcgyggtc	gcggccgagg	yctgcttytc	tgtccagccc	agggcctgtg	gggtcagggc	60
ggtgggtgca	gatggcatcc	actccggtgg	cttccccatc	tttctctggc	ctgagcaagg	120
tcagcctgca	gccagagtac	agagggccaa	cactggtgtt	cttgaacaag	ggccttagca	180
ggcctgaag	grccctctct	gtagtgttga	acttctctga	gccaggccac	atgttctctc	240
cataccgcag	gytagygatg	gtgaagttga	gggtgaaata	gtattmangr	agatggctgg	300
caracctgcc	cgggcgggccg	ctcsaaatcc				330

<210> 77
 <211> 361
 <212> DNA
 <213> Homo sapien

<400> 77						
agcgtgggtc	cgggcgaggt	gtccttcagg	gtctgcttat	gcccttggtc	aagaacacca	60
gtgtcagctc	tctgtactct	ggttgacagc	tgaccttgct	caggcctgag	aaggatgggg	120
cagccaccag	agtggatgct	gtctgcaccc	atcgctctga	ccccaaaagc	cctggactgg	180
acagagagcg	gctgtactgg	aagctgagcc	agctgaccca	cggcatactc	gagctggggc	240
cctacaccct	ggacagggac	agtctctatg	tcaatggttt	cacccatcgg	agctctgtac	300
ccaccaccag	caccgggggtg	gtcagcgagg	agccattcaa	cctgcccggg	cgggcgctcg	360
a						361

<210> 78
 <211> 356
 <212> DNA
 <213> Homo sapien

<220>

<221> misc_feature
 <222> (1)...(356)
 <223> n = A,T,C or G

<400> 78

ttggggnttt	mgagcggccg	cccgggcagg	taccggggtg	gtcagcgagg	agccattcac	60
actgaacttc	accatcaaca	acctgcggtg	tgaggagaac	atgcagcacc	ctggctccag	120
gaagttcaac	accacggaga	gggtccttca	gggcctgctc	aggtccctgt	tcaagagcac	180
cagtgttggc	cctctgtact	ctggctgcag	actgactttg	ctcagacttg	agaaacatgg	240
ggcagccact	ggagtggacg	ccatctgcac	cctccgcctt	gatcccactg	gtcctggact	300
ggacagagag	cggctatact	gggagctgag	ccagtcctct	ggcggngacn	ccnctt	356

<210> 79
 <211> 226
 <212> DNA
 <213> Homo sapien

<400> 79

agcgtgggtcg	cggccgaggt	ccagtcgcag	catgctcttt	ctcctgcccc	ctggcacagt	60
gaggaagatc	tctgtgtgta	gtgagaaggc	tgcatccac	tgagatggca	gtcaaaagtg	120
catttaatac	acctaacgta	tcgaacatca	tagcttggcc	caggttatct	catatgtgct	180
cagaacactt	acaatagcct	gcagacctgc	ccgggaggcc	gctcga		226

<210> 80
 <211> 444
 <212> DNA
 <213> Homo sapien

<220>

<221> misc_feature
 <222> (1)...(444)
 <223> n = A,T,C or G

<400> 80

tgtggtgttg	aacttcctgg	agncagggtg	acccatgtcc	tccccatact	gcaggttggt	60
gatggtgaag	ttgagggtga	atggtaccag	gagagggcca	gcagccataa	ttgtsgrgck	120
gsmgmssgag	gmwggwgtyy	cwgagggtcy	rarrtccact	gtggagggtcc	caggagtgt	180
ggtggtgggc	acagagstcy	gatgggtgaa	accattgaca	tagagactgt	tcctgtccag	240
ggtgtagggg	cccagctctt	yratgycatt	ggycagttkg	ctyagctccc	agtacagccr	300
ctctckgyyg	mgwccagsgc	ttttggggtc	aagatgatgg	atgcagatgg	catccactcc	360
agtggctgct	ccatccttct	cggacctgag	agaggtcagt	ctgcagccag	agtacagagg	420
gccaacactg	gtgttctttg	aata				444

<210> 81
 <211> 310
 <212> DNA
 <213> Homo sapien

<400> 81

tcgagcggcc	gcccgggcag	gtcaggaagc	acattggtct	tagagccact	gcctcctgga	60
ttccacctgt	gctgcggaca	tctccaggga	gtgcagaagg	gaagcaggtc	aaactgctca	120
gatcagtcag	actggtgtt	ctcagttctc	acctgagcaa	ggtcagtctg	cagccagagt	180
acagagggcc	aacactggtg	ttcttgaaca	agggcttgag	cagaccctgc	agaaccctct	240
tccgtggtgt	tgaacttctt	ggaaaccagg	gtgttgcatg	tttttcttca	taatgcaagg	300
ttggtgatgg						310

<210> 82
 <211> 571
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(571)
 <223> n = A,T,C or G

<400> 82
 acggtttcaa tggacacttt tattgtttac ttaatggatc atcaattttg tctcactacc 60
 tacaaatgga attcatcttt gtttccatgc tgagtagtga aacagtgcac aagctaataca 120
 taataacctta catcaaaaaga gaactaagct aacactgctc actttctttt taacaggcaa 180
 aatataaata tatgcactct anaatgcaca atggtttagt cactaaaaaa ttcaaattggg 240
 atcttgaaga atgtatgcaa atccagggtg cagtgaagat gagctgagat gctgtgcaac 300
 tgtttaaggg ttcttggcac tgcattctct ggccactagc tgaatcttga catggaagggt 360
 tttagctaata gccaaagtga gatgcagaaa atgctaagtt gacttagggg ctgtgcacag 420
 gaactaaaag gcaggaaagt actaaatatt gctgagagca tccaccccag gaaggacttt 480
 accttccagg agctccaaac tggcaccacc cccagtgtc acatggctga ctttatectc 540
 cgtgttccat ttggcacagc aagtggcagt g 571

<210> 83
 <211> 551
 <212> DNA
 <213> Homo sapien

<400> 83
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 cgagcttcac tttccaagct aggggatgtc tatgtcaatg atgcttttgg cactgctcac 180
 agagcccaca gctccatggt aggagtcaat ctgccacaga aggctggtgg gttttttgatg 240
 aagaaggagc tgaactactt tgcaaaggcc ttggagagcc cagagcgacc cttcctggcc 300
 atcctgggag gagctaaagt tgcagacaag atccagctca tcaataatat gctggacaaa 360
 gtcaatgaga tgattatttg tgggtggaat gcttttacct tccttaaggt gctcaacaac 420
 atggagattg gcacttctct gtttgatgaa gagggagcca agattgtcaa agacctaattg 480
 tccaaagctg agaagaatgg tgtgaagatt accttgctg ttgactttgt cactgctgac 540
 aagtttgatg a 551

<210> 84
 <211> 571
 <212> DNA
 <213> Homo sapien

<400> 84
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 cttctagctg ggacaaaagt tctttgtttt cccctgtag agtatcacag accttctgct 180
 gaagctggac ctctgtcttg gccttggaact cccaaatctg cttgtcatgt tcaagcctgg 240
 aaatgttaat ctttaattct tccatatgga tggacatctg tctaagttga tcctttagaa 300
 cactgcaatt atcttctttg agtctaattt cttcttcttt gctttgaatc gcatcactaa 360
 acttctcttc ccatttctta gcttcatcta tcacctgtc acgatcatcc tggaggggaag 420
 acatgctctt agtaaaggct gcaagctggg tcacagtact gtccaagttt tcctgaagtt 480
 gctgaacttc cttgtctttc ttgttcaaag taacctgaat ctctccaatt gtctcttcca 540

agtggacttt ttctctgccc aaagcatcca g

571

<210> 85
 <211> 561
 <212> DNA
 <213> Homo sapien

<400> 85
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 aatcaaagga ttcagcatgt ggtggaagct gtgaggcaag agaaacaaga actgtatggc 120
 aagttaagaa gcacagaggc aaacaagaag gagacagaaa agcagttgca ggaagctgag 180
 caagaaatgg aggaaatgaa agaaaagatg agaaaagttg ctaaactctaa acagcagaaa 240
 atcctagagc tggaagaaga gaatgaccgg cttagggcag aggtgcaccc tgcaggagat 300
 acagctaaag agtgtatgga aacacttctt tcttccaatg ccagcatgaa ggaagaactt 360
 gaaaggggtca aaatggagta tgaaaccctt tctaagaagt ttcagtcttt aatgtctgag 420
 aaagactctc taagtgaaga ggttcaagat ttaaagcatc agatagaagg taatgtatct 480
 aaacaagcta acctagaggc caccgagaaa catgataacc aaacgaatgt cactgaagag 540
 ggaacacagt ctataccagg t 561

<210> 86
 <211> 795
 <212> DNA
 <213> Homo sapien

<400> 86
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 aattctcacc gttacaacaa ccccatgagg tattttattcc cattctatag atagggaac 120
 cacagctcaa gtaagttagg aaactgagcc aagtatacac agaatacgaa gtggcaaaac 180
 tagaaggaaa gactgacact gctatctgct ggccctccagt gtccctggctc ttttcacacg 240
 ggttcaatgt ctccagcgct gctgctgctg ctgcattacc atgccctcat tgtttttctt 300
 cctctggtgt tcaactgcat ccttcaaaqa atctaactca ttccagagac cacttatttc 360
 tttctctctt tctgaaatta cttttaataa ttcttcatga gggggaaaag aagatgcctg 420
 ttggtagttt tgttgtttta gctgctcaat ttgggactta aacaatttgt tttcatcttg 480
 tacatcctgt aacagctgtg ttttgctaga aagatcactc tccctctctt ttagcatggc 540
 ttctaaccct ttcaattcat tttccttttc tttcaacaca atctcaagtt cttcaaactg 600
 tgatgcagaa gaggcctctt tcaagttatg ttgtgctact tcttgaacat gtgcttttaa 660
 agattcattt tctcttgaa gatcctgtaa ccacttccct gtattggcta ggtctttctc 720
 tttctcttcc aaaacagcct tcatgggtatt catctgttcc tcttttcctt ttaataagtt 780
 caggagcttc agaac 795

<210> 87
 <211> 594
 <212> DNA
 <213> Homo sapien

<400> 87
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 aatagccaat ggctgggtat attttcagaa aacatgatta gactaattca ttaatgggtg 180
 cttcaagctt ttccttattg gttccagaaa attcaccac cttttgtccc ttcttaaaaa 240
 actggaatgt tggcatgcat ttgacttcac actctgaagc aacatcctga cagtcattca 300
 catctacttc aaggaatatc acgttggaat acttttcaga gagggaaatga aagaaaggct 360
 tgatcatttt gcaaggccca caccacgtgg ctgagaagtc aactactaca agtttatcac 420
 ctgcagcgtc caaggcttcc tgaaaagcag tcttgctctc gatctgcttc accatcttgg 480
 ctgctggagt ctgacgagcg gctgtaagga ccgatggaaa tggatccaaa gcaccaaaaa 540

gagcttcaag actcgctgct tggcttgaat tcggatccga tatcgccatg gcct 594

<210> 88

<211> 557

<212> DNA

<213> Homo sapien

<400> 88

aagtgttagc	attaatgttt	tattgtcacg	cagatggcaa	ctgggtttat	gtcttcatat	60
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ttcagaaaac	atgattagac	taattcatta	atggtggctt	caagcttttc	cttattggct	180
ccagaaaatt	cacccacctt	ttgtcccttc	ttaaaaaact	ggaatgttgg	catgcatttg	240
acttcacact	ctgaagcaac	atcctgacag	tcattccacat	ctacttcaag	gaatatcacg	300
ttggaatact	tttcagagag	ggaatgaaag	aaaggcttga	tcattttgca	aggccacac	360
cacgtggctg	agaagtcaac	tactacaagt	ttatcacctg	cagcgtccaa	ggcttctga	420
aaagcagtct	tgctctcgat	ctgcttcacc	atcttggctg	ctggagtctg	acgagcggct	480
gtaaggaccg	atggaaatgg	atccaaagca	ccaaacagag	cttcaagact	cgctgcttgg	540
catgaattcg	gatccga					557

<210> 89

<211> 561

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(561)

<223> n = A,T,C or G

<400> 89

tacaaaacttt	attgaaacgc	acacgcgcac	acacacaaac	acccctgtgg	atagggaaaa	60
gcacctggcc	acagggtcca	ctgaaacggg	gaggggatgg	cagcttgtaa	tgtggctttt	120
gccacaaccc	ccttctgaca	gggaaggcct	tagattgagg	ccccacctcc	catggtgatg	180
gggagctcag	aatgggggtcc	agggagaatt	tggttagggg	gaggtgctag	ggaggcatga	240
gcagagggca	ccctccgagt	ggggtcccga	gggctgcaga	gtcttcagta	ctgtccctca	300
cagcagctgt	ctcaaggctg	ggccccctca	aggggcgtcc	cagcgcgggg	cctccctgcg	360
caaacacttg	gtacccctgg	ctgcgcagcg	gaagccagca	ggacagcagt	ggcgccgatc	420
agcacaacag	acgccttggc	ggtagggaca	gcaggcccag	ccctgtcggt	tgtctcgga	480
gcaggctctg	ttatcatggc	agaagtgtcc	ttcccacact	tcacgtcctt	cacaccacg	540
tganggctac	nggccaggaa	g				561

<210> 90

<211> 561

<212> DNA

<213> Homo sapien

<400> 90

cccgtgggtg	ccatccacgg	agttgttacc	tgatcttttg	aagcaggatc	gcccgtctgc	60
actgcagtgg	aagccccgtg	ggcagcagtg	atggccatcc	ccgcatgcca	cggcctctgg	120
gaaggggcag	caactggaag	tccctgagac	ggtaaagatg	caggagtggc	cggcagagca	180
gtgggcatca	acctggcagg	ggccaccag	atgcctgctc	agtgttgtgg	gccatttgc	240
cagaagggga	cggcagcagc	tgtagctggc	tcctccgggg	tccaggcagc	aggccacagg	300
gcagaactga	ccatctgggc	accgcgttcc	agccaccagg	cctgctgtta	aggccacca	360
gtcaccagg	gtccacatgg	tctgcctgcg	tccgaactcc	cggtccttgg	gccctgatgg	420
ttctacctgc	tgtgagctgc	ccagtgggaa	gtatggctgc	tgccaatgcc	caacgccacc	480

tgctgctccg atcacctgca ctgctgcccc aagacactgt gtgtgacctg atccagagta 540
 agtgcctctc caaggagaac g 561

<210> 91
 <211> 541
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(541)
 <223> n = A,T,C or G

<400> 91
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 gtctccctgg gctctgtttg gctctcggtta aggcaggcct acaccttttc ctctcctcta 120
 tggagagggg aatatgcatt aaggtagaaa gtcaccttcc aaaagtgaga aagggttcg 180
 attgctgctt caggactgtg gaattatttg gaatgtttta caaatgggtg ctacaaaaca 240
 acaaaaaagg taattacaaa atgtgtacat cacaacatgc tttttaaaga cattatgcat 300
 tgtgtcacaca ttcccttaaa tgttgtttcc aaagggtgctc agcctctagc ccagctggat 360
 tctccgggaa gaggcagaga cagtttggcg aaaaagacac aggggaaggag ggggtggtga 420
 aaggagaaag cagccttcca gttaaagatc agccctcagt taaaggtcag cttcccgcac 480
 gctggcctca ngcggagtct gggtcagagg gaggagcagc agcagggtgg gactggggcg 540
 t 541

<210> 92
 <211> 551
 <212> DNA
 <213> Homo sapien

<400> 92
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 gtgaagcgca agatccaggt tctgcagcag caggcagatg atgcagagga gcgagctgag 120
 cgctccagc gagaagttga gggagaaagg cgggcccggg aacaggctga ggctgagggtg 180
 gcctccttga accgtaggat ccagctggtt gaagaagagc tggaccgtgc tcaggagcgc 240
 ctggccactg ccctgcaaaa gctggaagaa gctgaaaaag ctgctgatga gagtgaagaa 300
 ggtatgaagg ttattgaaaa ccgggcctta aaagatgaag aaaagatgga actccaggaa 360
 atccaactca aagaagctaa gcacattgca gaagaggcag ataggaagta tgaagagggtg 420
 gctcgtaagt tggatgatcat tgaaggagac ttggaacgca cagaggaacg agctgagctg 480
 gcagagtccc gttgccgaga gatggatgag cagattagac tgatggacca gaacctgaag 540
 tgtctgagtg c 551

<210> 93
 <211> 531
 <212> DNA
 <213> Homo sapien

<400> 93
 gagaacttgg cttttattgt gggcccagga gggcaciaag gtcaggaggc ccaagggagg 60
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 gcacaggcct cacttctgctc agttccgggg agaacacctg cactgcatgg cgttgatgac 180
 ctgctgttac acgacagagc cattggtgca gtgcaagggc acgcgcatgg gctccgtcct 240
 cgagggcagg cagcaggagc attgctcctg cacatcctcg atgtcaatgg agtacacagc 300
 tttgctggca cactttccct ggcagtaatg aatgtccact tcctcttggg acttacaatc 360
 tcccactttg atgtactgca cttgggtgtg gatgtctttg caatcaggct cctcacatgt 420

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gtcacagcag gtgcctggaa ttttcacgat tttgcctcct tcagccagac acttgtgttc 480
atcaaatggt gggcagcccg tgaccctctt ctcccagatg tactctcttc t 531
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<210> 94
<211> 531
<212> DNA
<213> Homo sapien
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<220>
<221> misc_feature
<222> (1)...(531)
<223> n = A,T,C or G
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<400> 94
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ctgcagagtc atcgtgtcaa ttgtgaccat ggaccccgcc ctccatgtgc caacagccag 120
tctcctgttc ggggtggagga gacgtgtggc tgccgctgga cctgcccttg tgtgtgcacg 180
ggcagttcca ctccggcacat cgtcaccttc gatgggcaga atttcaagct tactggtagc 240
tgctcctatg tcatctttca aaacaaggag caggacctgg aagtgtcctt ccacaatggg 300
gcctgcagcc ccggggcaaa acaagcctgc atgaagtcca ttgagattaa gcatgctggc 360
gtctctgtcg agctgcacag taacatggag atggcagtg atgggagact ggtccttgcc 420
ccgtacgttg gtgaaaacat ggaagtcagc atctacggcg ctatcatgta tgaagtcagg 480
tttaccatc ttggccacat cctcacatac accgcncaa aacaacgagt t 531
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<210> 95
<211> 605
<212> DNA
<213> Homo sapien
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<400> 95
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tctcgatagt rwcaactkk r ytsramskma agkgyratgr wmttksywgw rasyktmwwm 120
rsgraraytt agacaycccm cctcwagagac gsagkaccar gtgcagaggt ggactctttc 180
tggatgttgt agtcagacag ggtgcgtcca tcttcagct gtttcccagc aaagatcaac 240
ctctgctgat caggagggat gccttcctta tcttgatct ttgccttgac attctcgatg 300
gtgtcactgg gctccacctc gaggggtgat gtcttaccag tcagggtctt cacgaagaty 360
tgcacccac ctctgagacg gagcaccagg tgcagggttg actctttctg gatgtttag 420
tcagacaggg tgcgyccatc ttccagctgc ttccsagca aagatcaacc tctgctggc 480
aggaggratg ccttccttgt cytggatctt tgcyttgacr ttctcratgg tgtcactcgg 540
ctccacttcg agagtgatgg tcttaccagt cagggtcttc acgaagatct gcatccacc 600
tctaa 605
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```
<210> 96
<211> 531
<212> DNA
<213> Homo sapien
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<400> 96
aagtcacaaa cagacaaaga ttattaccag ctgcaagcta tattagaagc tgaacgaaga 60
gacagaggtc atgattctga gatgattgga gaccttcaag ctccaattac atctttacaa 120
gaggaggtga agcatctcaa acataatctc gaaaaagtgg aaggagaaag aaaagaggct 180
caagacatgc ttaatcactc agaaaaggaa aagaataatt tagagataga tttaaactac 240
aaacttaaat cattacaaca acggttagaa caagaggtaa atgaacacaa agtaacccaa 300
gctcgtttta ctgacaaaca tcaatctatt gaagaggcaa agtctgtggc aatgtgtgag 360
atggaaaaaa agctgaaaga agaaagagaa gctcgagaga aggctgaaaa tcgggttgtt 420
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cagattgaga aacagtgttc catgctagac gttgatctga agcaatctca gcagaaacta 480
 gaacatttga ctggaaataa agaaaggatg gaggatgaag ttaagaatct a 531

<210> 97

<211> 1017

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(1017)

<223> n = A,T,C or G

<400> 97

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ccgggccttc	agcagccgct	cctacacgag	tgggcccggg	tcccgcatca	gctcctcgag	120
cttctcccg	gtgggcagca	gcaactttcg	cggtggcctg	ggcgccggct	atgggtggggc	180
cagcggcatg	ggaggcatca	ccgcagttac	ggtcaaccag	agcctgctga	gcccccttgt	240
cctggagggtg	gaccccaaca	tccaggccgt	gcgcacccag	gagaaggagc	agatcaagac	300
cctcaacaac	aagtttgcc	ccttcataga	caaggtacgg	ttcctggagc	agcagaacaa	360
gatgctggag	accaagtgga	gcctcctgca	gcagcagaag	acggctcgaa	gcaacatgga	420
caacatgttc	gagagctaca	tcaacarcct	taggcggcag	ctggagactc	tgggccagga	480
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gaaggatgtg	gatgaagctt	acatgaacaa	ggtagagctg	gagtctcgcc	tgggaagggt	660
gaccgacgag	atcaacttcc	tcaggcagct	gtatgaagag	gagatccggg	agctgcagtc	720
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ggatgacctg	cggcgcacaa	agactgagat	ctctgagatg	aaccgggaac	atcagcccgg	960
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<210> 98

<211> 561

<212> DNA

<213> Homo sapien

<400> 98

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tgggtctgga	aacccaaacc	ctcaaggatg	gcctggcgca	tgggggaacc	agcctgctgg	120
ggcagggggc	tacccagggg	cttcctatcc	tggggcctac	cccgggcagg	cacccccagg	180
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tggacagcca	agtgccaccg	gagcctaccc	tgccactggc	ccctatggcg	cccctgctgg	360
gccactgatt	gtgccttata	acctgccttt	gcctggggga	gtgggtgcctc	gcatgctgat	420
aacaattctg	ggcacgggtga	agcccaatgc	aaacagaatt	gcttttagatt	tccaaagagg	480
gaatgatgtt	gccttccact	ttaacccacg	cttcaatgag	aacaacagga	gagtcattgg	540
ttgcaatata	aagctggata	a				561

<210> 99

<211> 636

<212> DNA

<213> Homo sapien

<400> 99

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ggaaacttag	acaccccccc	tcragcgmag	kaccargtgc	aragggtggac	tctttctgga	120
tgttgtagtc	agacagggttr	cgwccatctt	ccagctgttt	yccrgcaaag	atcaacctct	180
gctgatcagg	aggratgcct	tccttatctt	ggatctttgc	cttgacattc	tcgatgggtgt	240
cactgggctc	cacctcgagg	gtgatgggtct	taccagtcag	ggtcttcacg	aagatytgca	300
tcccacctct	gagacggagc	accagggtgca	gggtrgactc	tttctggatg	ttgtagtcag	360
acagggtgcg	yccatcttcc	agctgctttc	csagcaaaga	tcaacctctg	ctggtcagga	420
ggratgcctt	ccttgctcytg	gatctttgcy	ttgacrttct	caatgggtgtc	actcggtctc	480
acttcgagag	tgatgggtctt	accagtcagg	gtcttcacga	agatctgcat	cccacctcta	540
agacggagca	ccagggtgcag	ggtggactct	ttctggatgg	ttgtagtcag	acagggtgcg	600
tccatcttcc	agctgtttcc	cagcaaagat	caacct			636

<210> 100

<211> 697

<212> DNA

<213> Homo sapien

<400> 100

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ccagaaagag	tccaccctgc	acctgggtgt	ccgtcttaga	ggtgggatgc	agatcttcgt	120
gaagaccctg	actggtaaga	ccatcactct	cgaagtggag	ccgagtgcac	ccattgagaa	180
ygtaargca	aagatccarg	acaaggaagg	catyctctct	gaccagcaga	ggttgatctt	240
tgctsggaaa	gcagctggaa	gatgggagca	ccctgtctga	ctacaacatc	cagaaagagt	300
cyaccctgca	cctgggtgctc	cgctctcagag	gtgggatgca	ratcttcgtg	aagaccctga	360
ctggtaagac	catcaccctc	gaggtggagc	ccagtgacac	catcgagaat	gtcaaggcaa	420
agatccaaga	taaggaaggc	atccctcctg	atcagcagag	gttgatcttt	gctgggaaac	480
agctggaaga	tggacgcacc	ctgtctgact	acaacatcca	gaaagagtcc	acctytgcac	540
ytggtmctbc	gtctyagagg	kgggrtgcaa	atctwmgtkw	agacactcac	tkkyaagryy	600
atcamcmwtg	akktcgakys	castkwact	wcrakaamg	tyrwwgcawa	gatccmagac	660
aaggaaggca	ttcctcctga	ccagcagagg	ttgatct			697

<210> 101

<211> 451

<212> DNA

<213> Homo sapien

<400> 101

atggagtctc	actctgtcga	ccaggctgga	gcgctgtggt	gcgatatcgg	ctcactgcag	60
tctccacttc	ctgggttcaa	gcgatccctc	tgccctcagcc	tcccagagtag	ctgggactac	120
aggcaggcgt	caccataatt	tttgtatttt	tagtagagac	atggtttcgc	catggttggt	180
gggctggtct	cgaactcctg	acctcaagtg	atctgtcctg	gcctcccaaa	gtggttggtat	240
tacaggcgaa	agccaacgct	cccggccagg	gaacaacttt	agaatgaagg	aaatatgcaa	300
aagaacatca	catcaaggat	caattaatta	ccatctatta	attactatat	gtgggtaatt	360
atgactattt	cccaagcatt	ctacgttgac	tgcttgagaa	gatgtttgtc	ctgcatgggtg	420
gagagtggag	aagggccagg	attcttaggt	t			451

<210> 102

<211> 571

<212> DNA

<213> Homo sapien

<400> 102

agcgcggtct	tccggcgcgca	gaaagctgaa	ggtgatgtgg	ccgccctcaa	ccgacgcac	60
cagctcgttg	aggaggagtt	ggacagggtc	caggaacgac	tggccacggc	cctgcagaag	120
ctggaggagg	cagaaaaagc	tgacagatgag	agtgaagag	gaatgaaggt	gatagaaaac	180

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cgggccatga aggatgagga gaagatggag attcaggaga tgcagctcaa agaggccaag      240
cacattgcgg aagaggctga ccgcaaatac gaggaggtag ctcgtaagct ggtcatcctg      300
gaggggtgagc tggagagggc agaggagcgt gcggagggtgt ctgaactaaa atgtggtgac      360
ctggaagaag aactcaagaa tgttactaac aatctgaaat ctctggaggc tgcattctgaa      420
aagtattctg aaaaggagga caaatatgaa gaagaaatta aacttctgtc tgacaaaactg      480
aaagaggctg agaccctgct tgaatttgca gagagaacgg ttgcaaaact ggaaaagaca      540
attgatgacc tggaagagaa acttgcccag c                                     571

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<210> 103
 <211> 451
 <212> DNA
 <213> Homo sapien

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<400> 103
gtgcacaggt cccatttatt gtagaaaata ataataatta cagtgatgaa tagctcttct      60
taaattacaa aacagaaacc acaaagaagg aagaggaaaa accccaggac ttccaagggt      120
gaagctgtcc cctcctccct gccaccctcc caggctcatt agtgtccttg gaaggggcag      180
aggactcaga ggggatcagt ctccaggggc cctgggctga agcgggtgag gcagagagtc      240
ctgaggccac agagctgggc aacctgagcc gcctctcttg cccctcccc caccactgcc      300
caaacctgtt tacagcacct tcgcccctcc cctctaaacc cgtccatcca ctctgcactt      360
cccaggcagg tgggtgggccc aggcctcagc catactcctg ggcgcggtt tcggtgagca      420
aggcacagtc ccagaggtga tatcaaggcc t                                     451

```

<210> 104
 <211> 441
 <212> DNA
 <213> Homo sapien

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<400> 104
gcaaggaact ggtctgctca cacttgctgg cttgcgcctc aggactggct ttatctcctg      60
actcacggtg caaagggtga ctctgcgaac gttaagtccg tccccagcgc ttggaatcct      120
acggccccc cagccggatc cctcagcct tccaggctct caactcccgt ggacgctgaa      180
caatggcctc catggggcta caggtaatgg gcatcgcgct ggccgtcctg ggctggctgg      240
ccgtcatgct gtgctgcgag ctgcccctgt ggcgcgtgac ggccttcctc ggcagcaaca      300
ttgtcacctc gcagaccatc tgggaggggc tatggatgaa ctgctggtg cagagcaccg      360
gccagatgca gtgcaagggt tacgactcgc tgctggcact gccgcaggac ctgcaggcgg      420
cccgcgcct cgtcatcctc a                                     441

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<210> 105
 <211> 509
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(509)
 <223> n = A,T,C or G

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<400> 105
tgcaaaaagg acacaggggt tcaaaaataa aaatttctct tccccctccc caaacctgta      60
ccccagctcc ccgaccacaa cccccctcct cccccgggga aagcaagaag gagcaggtgt      120
ggcatctgca cgtgggaaga gagaggccgg ggaggtgccg agctcggtgc tggctctctt      180
ccaaatataa atacntgtgt cagaactgga aaatcctcca gcaccacca cccaagcact      240
ctccgttttc tgccggtgtt tggagagggg cggggggcag gggcgccagg caccggctgg      300
ctgcggtcta ctgcatccgc tgggtgtgca ccccgcgagc ctctgctgct tcattgtaga      360

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agagatgaca	ctcgggggtcc	ccccggatgg	tggggggctcc	ctggatcagc	ttccccggtgt	420
tgggggttcac	acaccagcac	tccccacgct	gccccgttcag	agacatcttg	cactgtttga	480
ggttgtagac	gccatgcttg	tcacagttg				509

<210> 106

<211> 571

<212> DNA

<213> Homo sapien

<400> 106

gggttgagg	gactggttct	ttatttcaaa	aagacacttg	tcaatattca	gtatcaaaac	60
agttgcacta	ttgatttctc	tttctcccaa	tcggccccaa	agagaccaca	taaaaggaga	120
gtacatttta	agccaataag	ctgcaggatg	tacacctaac	agacctccta	gaaaccttac	180
cagaaaatgg	ggactgggta	gggaaggaaa	cttaaaagat	caacaaactg	ccagcccacg	240
gactgcagag	gctgtcacag	ccagatgggg	tggccagggt	gccacaaacc	caaagcaaag	300
tttcaaaaata	atataaaaatt	taaaaagttt	tgtacataag	ctattcaaga	tttctccagc	360
actgactgat	acaaagcaca	attgagatgg	cacttctaga	gacagcagct	tcaaaccacg	420
aaaagggtga	tgagatgagt	ttcacatggc	taaatcagtg	gcaaaaacac	agtcttcttt	480
ctttctttct	ttcaaggagg	caggaaagca	attaagtggg	cacctcaaca	taagggggac	540
atgatccatt	ctgtaagcag	ttgtgaaggg	g			571

<210> 107

<211> 555

<212> DNA

<213> Homo sapien

<400> 107

caggaaccgg	agcgcgagca	gtagctgggt	gggcaccatg	gctgggatca	ccaccatcga	60
ggcgggtgaag	cgcaagatcc	aggttctgca	gcagcaggca	gatgatgcag	aggagcgagc	120
tgagcgcctc	cagcgagaag	ttgagggaga	aaggcgggcc	cgggaacagg	ctgaggctga	180
ggtggcctcc	ttgaaccgta	ggatccagct	ggttgaagaa	gagctggacc	gtgctcagga	240
gcgcctggcc	actgccctgc	aaaagctgga	agaagctgaa	aaagctgctg	atgagagtga	300
gagaggtatg	aaggttattg	aaaaccgggc	cttaaaagat	gaagaaaaga	tggaaactcca	360
ggaaatccaa	ctcaaagaag	ctaagcacat	tgcagaagag	gcagatagga	agtatgaaga	420
ggtggctcgt	aagttggtga	tcattgaagg	agacttgga	cgcacagagg	aacgagctga	480
gctggcagag	tcccgttgcc	gagagatgga	tgagcagatt	agactgatgg	accagaacct	540
gaagtgtctg	agtg					555

<210> 108

<211> 541

<212> DNA

<213> Homo sapien

<400> 108

atctacgtca	tcaatcaggc	tgagacacc	atgttcaatc	gagctaagct	gctcaatatt	60
ggctttcaag	aggccttgaa	ggactatgat	tacaactgct	ttgtgttcag	tgatgtggac	120
ctcattccga	tgagcagacc	taatgcctac	agggtgtttt	cgcagccacg	gcacatttct	180
gttgcaatgg	acaagttcgg	gtttagcctg	ccatatgttc	agtattttgg	agggtgtctct	240
gctctcagta	aacaacagtt	tcttgccatc	aatggattcc	ctaataatta	ttgggggttg	300
ggaggagaag	atgacgacat	ttttaacaga	ttagttcata	aaggcatgtc	tatatcacgt	360
ccaaatgctg	tagtagggag	gtgtcgaatg	atccggcatt	caagagacaa	gaaaaatgag	420
cccaatcctc	agagggtttga	ccggatcgca	catacaaagg	aaacgatgcg	cttcgatggt	480
ttgaactcac	ttacctacaa	ggtgttgga	gtcagagata	cccgttatat	acccaaatca	540
c						541

<210> 109
 <211> 411
 <212> DNA
 <213> Homo sapien

<400> 109
 ctagacctct aattaaaagg cacaatcatg ctggagaatg aacagtctga ccccgagggc 60
 cacagcgaat tttaggggaag gaggcaaaga ggtgagaagg gaaaggaaaag aaggaaggaa 120
 ggagaacaat aagaactgga gacgttgggt gggtcaggga gtgtggtgga ggctcggaga 180
 gatggtaaac aaacctgact gctatgagtt ttcaacccca tagtctaggg ccatgagggc 240
 gtcagttctt ggtggctgag ggtccttcca cccagcccac ctgggggaggt ggagtgggga 300
 gttctgccag gtaagcagat gttgtctccc aagttcctga cccagatgtc tggcaggata 360
 acgctgacct gttccctcaa caagggacct gaaagtaatt ttgctcttta c 411

<210> 110
 <211> 451
 <212> DNA
 <213> Homo sapien

<400> 110
 ccgaattcaa gcgtcaacga tccytccctt accatcaaatt caattggcca ccaatggtac 60
 tgaacctacg agtacaccga ctacgggagg actaatcttc aactcctaca tacttcccc 120
 attattccta gaaccaggcg acctgcgact ccttgacgtt gacaatcgag tagtactccc 180
 gattgaagcg cccattcgta taataattac atcacaagac gtcttgcaact catgagctgt 240
 cccacatta ggcttaaaaa cagatgcaat tcccggacgt ctaagccaaa ccactttcac 300
 cgctacacga cggggggtat actacggtca atgctctgaa atctgtggag caaaccacag 360
 tttcatgccc atcgctctag aattaattcc cctaaaaatc ttgaaatag ggcccgtatt 420
 taccctatag caccctctct acccctctta g 451

<210> 111
 <211> 541
 <212> DNA
 <213> Homo sapien

<400> 111
 gctcttcaca cttttattgt taattctctt cacatggcag atacagagct gtcgtcttga 60
 agaccaccac tgaccaggaa atgccacttt tacaaaaatc tccccctttt tcatgattgg 120
 aacagttttc ctgaccgtct gggagcgttg aagggtgacc agcacatttg cacatgcaaa 180
 aaaggagtga ccccaaggcc tcaaccacac ttcccagagc tcaccatggg ctgcagggtga 240
 cttgccaggt ttgggggttcg tgagctttcc ttgctgctgc ggtggggagg cctcaagaa 300
 ctgagaggcc ggggtatgct tcatgagtgt taacatttac gggacaaaag cgcatcatta 360
 ggataaggaa cagccacagc acttcatgct tgtgaggggt agctgtagga gcgggtgaaa 420
 ggattccagt ttatgaaaat ttaaagcaaa caacggtttt tagctgggtg ggaaacagga 480
 aaactgtgat gtcggccaat gaccaccatt tttctgcca tgtgaagggt cccatgaaac 540
 c 541

<210> 112
 <211> 521
 <212> DNA
 <213> Homo sapien

<400> 112
 caagcgcttg gcgtttggac ccagttcagt gaggttcttg ggttttgtgc ctttggggat 60
 tttggtttga cccaggggtc agccttagga aggtcttcag gaggaggccg agttccccct 120
 cagtaccacc cctctctccc cactttccct ctcccgccaa catctctggg aatcaacagc 180

atattgacac	gttggagccg	agcctgaaca	tgcccctcgg	ccccagcaca	tggaaaaccc	240
ccttccttgc	ctaaggtgtc	tgagtttctg	gctcttgagg	catttccaga	cttgaaattc	300
tcatcagtc	attgctcttg	agtctttgca	gagaaacctca	gatcaggtgc	acctgggaga	360
aagactttgt	ccccacttac	agatctatct	cctcccttgg	gaagggcagg	gaatggggac	420
ggtgtatgga	ggggaaggga	tctcctgcgc	ccttcattgc	cacacttggt	gggaccatga	480
acatctttag	tgtctgagct	tctcaaatta	ctgcaatagg	a		521

<210> 113
 <211> 568
 <212> DNA
 <213> Homo sapien

<400> 113						
agcgtcaaat	cagaatggaa	aagactcaaa	accatcatca	acaccaagat	caaaaggaca	60
agratccttc	aagaaacagg	aaaaaactcc	taaaacacca	aaaggaccta	gttctgtaga	120
agacattaaa	gcaaaaatgc	aagcaagtat	agaaaaaggt	ggttctcttc	ccaaagtgga	180
agccaaattc	atcaattatg	tgaagaattg	cttcgggatg	actgaccaag	aggctattca	240
agatctctgg	cagtggagga	agtctcttta	agaaaatagt	ttaaacaatt	tgtaaaaaaa	300
ttttccgtct	tatttcattt	ctgtaacagt	tgatatctgg	ctgtcctttt	tataatgcag	360
agtgagaact	ttccctaccg	tgtttgataa	atggtgtcca	ggttctattg	ccaagaatgt	420
gttgtccaaa	atgcctgttt	agtttttaaa	gatggaactc	caccctttgc	ttggttttaa	480
gtatgtatgg	aatgttatga	taggacatag	tagtagcggg	ggtcagacat	ggaaatggtg	540
ggsmgacaaa	aatatacatg	tgaataaa				568

<210> 114
 <211> 483
 <212> DNA
 <213> Homo sapien

<400> 114						
tccgaattcc	aagcgaatta	tggaacaaacg	attcctttta	gaggattact	tttttcaatt	60
tgggttttag	taatctaggc	tttgccgtgta	aagaatacaa	cgatggattt	taaatactgt	120
ttgtggaatg	tgtttaaaag	attgattcta	gaacctttgt	atatttgata	gtattttctaa	180
ctttcatattc	tttactgttt	gcagttaatg	ttcatgttct	gctatgcaat	cgtttatatg	240
cacgtttctt	taattttttt	agatttttct	ggatgtatag	tttaaacac	aaaaagtcta	300
tttaaaactg	tagcagtagt	ttacagttct	agcaaagagg	aaagttgtgg	ggttaaactt	360
tgtattttct	ttcttataga	ggcttctaaa	aaggatattt	tatatgttct	ttttaacaaa	420
tattgtgtac	aacctttaaa	acatcaatgt	ttggatcaaa	acaagaccca	gcttattttc	480
tgc						483

<210> 115
 <211> 521
 <212> DNA
 <213> Homo sapien

<400> 115						
tgtggtggcg	cggtgtgagg	tgagggccca	ggactctgac	cctgcccctg	ccttcagcaa	60
ggcccccgcc	agcgccggcc	actacgaact	gccgtgggtt	gaaaaatata	ggccagtaaa	120
gctgaatgaa	attgtcggga	atgaagacac	cgtgagcagg	ctagaggtct	ttgcaaggga	180
aggaaatgtg	cccaacatca	tcattgcggg	ccctccagga	accggcaaga	ccacaagcat	240
tctgtgcttg	gcccggggcc	tgctggggcc	agcactcaaa	gatgccatgt	tggaactcaa	300
tgcttcaaat	gacaggggca	ttgacgttgt	gaggaataaa	attaaaatgt	ttgctcaaca	360
aaaagtcaact	cttcccaaag	gccgacataa	gatcatcatt	ctggatgaag	cagacagcat	420
gaccgacgga	gcccagcaag	ccttgaggag	aacctgggaa	atctactcta	aaaccactcg	480
ttcgcccttg	cttgtaatgc	ttcggataag	atcatcgagc	c		521

<210> 116
 <211> 501
 <212> DNA
 <213> Homo sapien

<400> 116
 ctttgcaaag cttttatttc atgtctgcgg catggaatcc acctgcacat ggcatcttag 60
 ctgtgaagga gaaagcagtg cacgagaagg aatgagtggg cggaaccaac ggcctccaca 120
 agctgccttc cagcagcctg ccaaggccat ggcagagaga gactgcaaac aaacacaagc 180
 aaacagagtc tcttcacagc tggagtctga aagctcatag tggcatgtgt gaatctgaca 240
 aaattaaaaag tgtgcatagt ccattacatg cataaaacac taataataat cctgtttaca 300
 cgtgactgca gcaggcaggc ccagctccac cactgccctc ctgccacatc acatcaagtg 360
 ccatggttta gaggggtttt catatgtaat tcttttattc tgtaaaagggt aacaaaatat 420
 acagaacaaa actttccctt tttaaaacta atgttacaaa tctgtattat cacttgata 480
 taaatagtat ataagctgat c 501

<210> 117
 <211> 451
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(451)
 <223> n = A,T,C or G

<400> 117
 caagggatat atgttgaggg tacrgrgtga cactgaacag atcacaaagc acgagaaaca 60
 ttagttctct ccctccccag cgtctccttc gtctccctgg ttttccgatg tccacagagt 120
 gagattgtcc ctaagtaact gcatgatcag agtgctgkct ttataagact cttcattcag 180
 cgtatccaat tcagcaattg cttcatcaaa tgccgttttt gccaggctac aggccttttc 240
 aggagagttt agaatctcat agtaaaagac tgagaaattt agtgccagac caagacgaat 300
 tgggtgtgta ggctgcattn ctttcttact aatttcaaat gcttcctggg aagcctgctg 360
 ggagttcgac acaagtgggt tgtttggtgc tccagatgcc acttcagaaa gatacctaaa 420
 ataatctcct ttcattttca aagtagaaca c 451

<210> 118
 <211> 501
 <212> DNA
 <213> Homo sapien

<400> 118
 tccggagccg gggtagtcgc cgccgccgcc gccggtgcag ccaactgcagg caccgctgcc 60
 gccgcctgag tagtgggctt aggaaggaag aggtcatctc gctcggagct tcgctcggaa 120
 gggctctttgt tccctgcagc cctcccacgg gaatgacaat ggataaaaagt gagctgggtac 180
 agaaagccaa actcgctgag caggctgagc gatatgatga tatggctgca gccatgaagg 240
 cagtacaga acaggggcat gaactctcca acgaagagag aaatctgctc tctgttgctt 300
 acaagaatgt ggtaaggccg cccgccgctc ttcctggcgt gtcattctcca gcattgagca 360
 gaaaacagag aggaatgaga agaagcagca gatgggcaaa gagtaccgtg agaagataga 420
 ggcagaactg caggacatct gcaatgatgt tctggagctt gttggacaaa tatcttattc 480
 caatgctaca caaccagaa a 501

<210> 119
 <211> 391

<212> DNA

<213> Homo sapien

<400> 119

aaaaagcagc	argttcaaca	caaaatagaa	atctcaaatg	taggatagaa	caaaaccaag	60
tgtgtgaggg	gggaagcaac	agcaaaagga	agaaatgaga	tgttgcaaaa	aagatggagg	120
agggttcccc	tctcctctgg	ggactgactc	aaacactgat	gtggcagtat	acaccattcc	180
agagtcaggg	gtgttcattc	ttttttggga	gtaagaaaag	gtggggatta	agaagacgtt	240
tctggaggct	tagggaccaa	ggctgggtctc	tttccccct	cccaaccccc	ttgatccctt	300
tctctgatca	ggggaaagga	gctcgaatga	gggaggtaga	gttggaaagg	gaaaggattc	360
cacttgacag	aatgggacag	actccttccc	a			391

<210> 120

<211> 421

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(421)

<223> n = A,T,C or G

<400> 120

tggcaatagc	acagccatcc	aggagctctt	cargcgcctc	tcggagcagt	tactgccat	60
gttccgcccg	aaggccttcc	tcactggta	cacaggcgag	ggcatggacg	agatggagtt	120
caccgaggct	gagagcaaca	tgaacgacct	cgtctctgag	tatcaagcag	taccaggatg	180
ccaccgcaga	agaggaggag	gatttcgggtg	aggaggccga	agaggaggcc	taaggcagag	240
cccccatcac	ctcaggcttc	tcagttccct	tagccgtctt	actcaactgc	ccctttcctc	300
tcctcagaa	tttgtgtttg	ctgcctctat	cttggttttt	gttttttctt	ctgggggggt	360
ctagaacagt	gcctggcaca	tagtaggcgc	tcaataaata	cttggttgnt	gaatgtctcc	420
t						421

<210> 121

<211> 206

<212> DNA

<213> Homo sapien

<400> 121

agctggcgct	agggtcgggt	tgtgaaatac	agcgttgtca	gcccttgccg	tcagtgtaga	60
aaccacgccc	tgtaaggtcg	gtcttcgtcc	atctgctttt	ttctgaaata	cactaagagc	120
agccacaaaa	ctgtaacctc	aaggaaacca	taaagcttgg	agtgccttaa	tttttaacca	180
gtttccaata	aaacggttta	ctacct				206

<210> 122

<211> 131

<212> DNA

<213> Homo sapien

<400> 122

ggagatgaag	atgaggaagc	tgagtcagct	acgggcargc	gggcagctga	agatgatgag	60
gatgacgatg	tcgataccaa	gaagcagaag	accgacgagg	atgactagac	agcaaaaaag	120
gaaaagttaa	a					131

<210> 123

<211> 231

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(231)

<223> n = A,T,C or G

<400> 123

gatgaaaatt aaataacttaa attaatcaaa aggcactacg ataccaccta aaacctactg	60
cctcagtggc agtakgctaa kgaagatcaa gctacagsac atyatctaata atgaatgtta	120
gcaattacat akcargaagc atgtttgctt tccagaagac tatggnacaa tggtcattwg	180
ggcccaagag gatatttggc cnggaaagga tcaagataga tnaangtaaa g	231

<210> 124

<211> 521

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(521)

<223> n = A,T,C or G

<400> 124

gagtagcaac gcaaagcgct tggatttgag tctgtgggsg acttcggttc cggtctctgc	60
agcagccgtg atcgcttagt ggagtgccta gggtagttgg ccaggatgcc gaatatcaaa	120
atcttcagca ggcagctccc accaggactt atctcasaaa attgctgacc gcctgggcct	180
ggagctaggc aaggtggtga ctaagaaatt cagcaaccag gagacctgtg tggaaattgg	240
tgaagtgtta ccgtggagag gatgtctaca ttgttcagag tggntgtggc gaaatcaatg	300
acaatttaaat ggagcttttg atcatgatta atgcctgcaa gattgcttca gccagccggg	360
ttactgcagt catcccatgc ttcccttatg ccccggcagg ataagaaaga tnagagccgg	420
gccgccaatc tcagccaagc ttggtgcaaa tatgctatct gtagcagtgc agatcatatt	480
atcaccatgg acctacatgc ttctcaaatt canggcctttt t	521

<210> 125

<211> 341

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(341)

<223> n = A,T,C or G

<400> 125

atgcaaaaagg ggacacaggg gggtcaaaaa taaaaatttc tcttccccct ccccaaacct	60
gtacccccagc tccccgacca caacccccct cctcccccg ggaagcaag aaggagcagg	120
tgtggcatct gcagctggga agagagaggc cggggagggtg ccgagctcgg tgctggcttc	180
tttccaaata taaatacgtg tgtcagaact ggaaaatcct ccagcaccaca ccaccaagc	240
actctccgtt ttctgcgggt gtttggagag gggcggnngg caggggcgcc aggcaccggc	300
tggctgcgggt ctactgcac cgcctgggtgt gcacccccgcg a	341

<210> 126

<211> 521

<212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(521)
 <223> n = A,T,C or G

<400> 126

agggttgaga	aggatcatgca	ggtgcagatt	gtccaggskc	agccacaggg	tcaagcccaa	60
caggcccaga	gtggcactgg	acagaccatg	caggatgatgc	agcagatcat	cactaacaca	120
ggagagatcc	agcagatccc	ggtgcagctg	aatgccggcc	agctgcagta	tatccgctta	180
gccagcctg	tatcaggcac	tcaagttgtg	cagggacaga	tccagacact	tgccaccaat	240
gctcaacaga	ttacacagac	agagggtccag	caaggacagc	agcagttcaa	gccagttcac	300
aagatggaca	gcagctctac	cagatccagc	aagtcacat	gcctgcgggc	cangacctcg	360
ccagcccag	ttcatccagt	caagccaacc	agcccttcna	cgggcaggcc	ccccaggtga	420
ccggcgactg	aagggcctga	gctggcaagg	ccaangacac	ccaacacaat	ttttgccata	480
cagccccag	gcaatgggca	cagcctttct	tcccagagga	c		521

<210> 127
 <211> 351
 <212> DNA
 <213> Homo sapien

<400> 127

tgagatttat	tgcatttcat	gcagcttgaa	gtccatgcaa	aggrgactag	cacagttttt	60
aatgcattta	aaaaataaaa	gggaggtggg	cagcaaacac	acaaagtcct	agtttcctgg	120
gtccctggga	gaaaagagtg	tggcaatgaa	tccaccact	ctccacaggg	aataaatctg	180
tctcttaaat	gcaaagaatg	tttccatggc	ctctggatgc	aaatacacag	agctctgggg	240
tcagagcaag	ggatggggag	aggaccacga	gtgaaaaagc	agctacacac	attcacctaa	300
ttccatctga	gggcaagaac	aacgtggcaa	gtcttggggg	tagcagctgt	t	351

<210> 128
 <211> 521
 <212> DNA
 <213> Homo sapien

<400> 128

tccagacatg	ctcctgtcct	aggcggggag	caggaaccag	acctgctatg	ggaagcagaa	60
agagttaagg	gaaggtttcc	tttcattcct	gttccttctc	ttttgctttt	gaacagtttt	120
taaatatact	aatagctaag	tcatttgcca	gccaggctcc	ggtgaacagt	agagaacaag	180
gagcttgcta	agaattaatt	ttgctgtttt	tcacccatt	caaacagagc	tgccctgttc	240
cctgatggag	ttccattcct	gccagggcac	ggctgagtaa	cacgaagcca	ttcaagaaaag	300
gcgggtgtga	aatcactgcc	accccatgga	cagaccctc	actcttcctt	cttagccgca	360
gcgctactta	ataaatatat	ttatactttg	aaattatgat	aaccgatttt	tcccatgcgg	420
catcctaagg	gcacttgcca	gctcttatcc	ggacagtcaa	gcactgttgt	tggaacaacag	480
ataaaggaaa	agaaaaagaa	gaaaacaacc	gcaacttctg	t		521

<210> 129
 <211> 521
 <212> DNA
 <213> Homo sapien

<400> 129

tgagacggac	cactggcctg	gtccccctc	atktgctgtc	gtaggacctg	acatgaaacg	60
------------	------------	-----------	------------	------------	------------	----

cagatctagt	ggcagagagg	aagatgatga	ggaacttctg	agacgtcggc	agcttcaaga	120
agagcaatta	atgaagctta	actcaggcct	gggacagttg	atcttgaaaag	aagagatgga	180
gaaagagagc	cgggaaaggt	catctctgtt	agccagtcgc	tacgattctc	ccatcaactc	240
agcttcacat	attccatcat	ctaaaactgc	atctctccct	ggctatggaa	gaaatgggct	300
tcaccggcct	gtttctaccg	acttcgctca	gtataacagc	tatggggatg	tcagcggggg	360
agtgcgagat	taccagacac	ttccagatgg	ccacatgcct	gcaatgagaa	tggaccgagg	420
agtgtctatg	cccaacatgt	tggaaacaaa	gatatttcca	tatgaaatgc	tcattggtgac	480
caacagaggg	ccgaaaccaa	atctcagaga	ggtggacaga	a		521

<210> 130

<211> 270

<212> DNA

<213> Homo sapien

<400> 130

tcactttatt	tttcttgtat	aaaaacccta	tgtttagtagc	acagctggag	cctgagtccg	60
ctgcacggag	actctgggtg	gggtcttgac	gaggtgggtca	gtgaactcct	gatagggaga	120
cttggtgaat	acagtctcct	tccagaggtc	gggggtcagg	tagctgtagg	tcttagaaat	180
ggcatcaaa	gtggccttgg	cgaagttgcc	caggggtggca	gtgcagcccc	gggctgaggt	240
gtagcagtca	tcgataccag	ccatcatgag				270

<210> 131

<211> 341

<212> DNA

<213> Homo sapien

<400> 131

ctggaatata	gacccgtgat	cgacaaaact	ttgaacgagg	ctgactgtgc	caccgtcccc	60
ccagccattc	gctcctactg	atgagacaag	atgtggtgat	gacagaaatca	gcttttgttaa	120
ttatgtataa	tagctcatgc	atgtgtccat	gtcataactg	tcttcatacg	cttctgcact	180
ctggggaaga	aggagtacat	tgaagggaga	ttggcaccta	gtggctggga	gcttgccagg	240
aacccagtgg	ccagggagcg	tggcacttac	ctttgtccct	tgcttcattc	ttgtgagatg	300
ataaaaactgg	gcacagctct	taaataaaat	ataaatgaac	a		341

<210> 132

<211> 844

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(844)

<223> n = A,T,C or G

<400> 132

tgaatgggga	ggagctgacc	caggaaatgg	agcttgngga	gaccaggcct	gcaggggatg	60
gaaccttcca	gaagtgggca	tctgtggtgg	tgccctcttg	gaaggagcag	aagtacacat	120
gccatgtgga	acatgagggg	ctgcctgagc	ccctcaccct	gagatggggc	aaggaggagc	180
ctccttcac	caccaagact	aacacagtaa	tcattgctgt	tccggttgte	cttggagctg	240
tggatcatcct	tggagctgtg	atggcttttg	tgatgaagag	gaggagaaac	acaggtggaa	300
aaggagggga	ctatgctctg	gtccaggct	cccagagctc	tgatatgtct	ctccagatt	360
gtaaagtgtg	aagacagctg	cctggtgtgg	acttggtgac	agacaatgtc	ttcacacatc	420
tcctgtgaca	tccagagacc	tcagttctct	ttagtcaagt	gtctgatgtt	ccctgtgagt	480
ctgcgggctc	aaagtgaaga	actgtggagc	ccagtccacc	cctgcacacc	aggaccctat	540
ccctgcactg	ccctgtgttc	ccttccacag	ccaaccttgc	tgctccagcc	aaacattggt	600

ggacatctgc	agcctgtcag	ctccatgcta	ccctgacctt	caactcctca	cttccacact	660
gagaataata	atttgaatgt	gggtggctgg	agagatggct	cagcgctgac	tgctcttcca	720
aaggtcctga	gttcaaatac	cagcaaccac	atgggtggctc	acaaccatct	gtaatgggat	780
ctaataccct	cttctgcagt	gtctgaagac	asctacagtg	tacttacata	taataataaa	840
taag						844

<210> 133

<211> 601

<212> DNA

<213> Homo sapien

<400> 133

ggccgggccc	gcgcgcccc	gccacacgca	cgccggggcgt	gccagtttat	aaagggagag	60
agcaagcagc	gagtccttgaa	gctctgtttg	gtgcttttga	tccatttcca	tcgggtcctta	120
cagccgctcg	tcagactcca	gcagccaaga	tggtgaagca	gatcgagagc	aagactgctt	180
ttcaggaagc	cttggacgct	gcaggtgata	aactttagt	agttgacttc	tcagccacgt	240
ggtgtgggcc	ttgcaaaatg	atcaagcctt	tctttcattc	cctctctgaa	aagtattcca	300
acgtgatatt	ccttgaagta	gatgtggatg	actgtcagga	tgttgcttca	gagtgtgaag	360
tcaaatgcat	gccaacattc	cagtttttta	agaagggaca	aaaggtgggt	gaattttctg	420
gagccaataa	ggaaaagctt	gaagccacca	ttaatgaatt	agtctaatac	tgttttctga	480
aaatataacc	agccattggc	tattttaaac	ttgtaatttt	tttaattttac	aaaaatataa	540
aatatgaaga	cataaaccm	gttgccatct	gcgtgacaat	aaaacattaa	tgctaacact	600
t						601

<210> 134

<211> 421

<212> DNA

<213> Homo sapien

<400> 134

tcacataaga	aatttaagca	agttacrcra	tcttaaaaaa	cacaacgaat	gcatttttaat	60
agagaaacc	ttccctccct	ccacctccct	ccccaccct	cctcatgaat	taagaatcta	120
agagaagaag	taaccataaa	accaagtttt	gtggaatcca	tcattccagag	tgcttacatg	180
gtgattaggt	taatattgcc	ttcttacaaa	atttctatatt	taaaaaaaat	tataaccttg	240
attgcttatt	acaaaaaaat	tcagtacaaa	agttcaatat	attgaaaaat	gcttttcccc	300
tccttcacag	caccgtttta	tatatagcag	agaataatga	agagattgct	agtctagatg	360
gggcaatctt	caaattacac	caagacgcac	agtggtttat	ttacctcccc	cttctcataa	420
g						421

<210> 135

<211> 511

<212> DNA

<213> Homo sapien

<400> 135

ggaaaggatt	caagaattag	aggacttgct	tgctrragaa	aaagacaact	ctcgtcgcat	60
gctgacagac	aaagagagag	agatggcgga	aataagggat	caaatgcagc	aacagctgaa	120
tgactatgaa	cagcttcttg	atgtaaagtt	agccctggac	atggaaatca	gtgcttacag	180
gaaactctta	gaaggcgaag	aagagaggtt	gaagctgtct	ccaagccctt	cttcccgtgt	240
gacagtatcc	cgagcatcct	caagtcgtag	tgtaccgtac	aactagagga	aagcgggaaga	300
gggttgatgt	ggaagaatca	gaggcgaagt	agtagtggtt	gcattctctca	ttccgcctca	360
accactggaa	atgtttgcat	cgaagaaatt	gatgttgatg	ggaaatttat	cccgtttgaa	420
gaacactttc	gaacaggatc	aaccaatggg	aaggcttggg	agatgatcag	aaaaattgga	480
gacacatcag	tcagttataa	atatacctca	a			511

<210> 136
 <211> 341
 <212> DNA
 <213> Homo sapien

<400> 136
 catgggtttc accaggttgg ccaggctgct cttgaactsc tgacctcagg tgateccaccc 60
 gcctcggcct cccaaagtgc tgggattaca ggcgtgagcc accacgcccg gcccccaaag 120
 ctgtttcttt tgtcttttagc gtaaagctct cctgccatgc agtatctaca taactgacgt 180
 gactgccagc aagctcagtc actccgtggg ctttttctct ttcagttct tctctctctc 240
 ttcaagttct gcctcagtg aagctgcagg tccccagtta agtgatcagg tgagggttct 300
 ttgaacctgg ttctatcagt cgaattaatc cttcatgatg g 341

<210> 137
 <211> 551
 <212> DNA
 <213> Homo sapien

<400> 137
 gatgtgttgg accctctgtg tcaaaaaaaaa cctcacaaag aatccccctgc tcattacaga 60
 agaagatgca tttaaaatat gggttatttt caacttttta tctgaggaca agtatccatt 120
 aattattgtg tcagaagaga ttgaatacct gcttaagaag cttacagaag ctatgggagg 180
 aggttggcag caagaacaat ttgaacatta taaaatcaac tttgatgaca gtaaaaatgg 240
 cctttctgca tgggaactta ttgagcttat tggaaatgga cagtttagca aaggcatgga 300
 ccggcagact gtgtctatgg caattaatga agtctttaat gaacttatat tagatgtgtt 360
 aaagcagggt tacatgatga aaaagggcc aagacggaaa aactggactg aaagatgggt 420
 tgtactaaaa cccaacataa tttcttacta tgtgagtga gatctgaagg ataagaaagg 480
 agacattctc ttggatgaaa attgctgtgt agaagtcctt gcctgacaaa agatggaaa 540
 aaatgccttt t 551

<210> 138
 <211> 531
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(531)
 <223> n = A,T,C or G

<400> 138
 gactggttct ttatttcaaa aagacacttg tcaatattca gtrtcaaaac agttgcacta 60
 ttgattttctc tttctcccaa toggcccca agagaccaca taaaaggaga gtacatttta 120
 agccaataag ctgcaggatg tacacctaac agacctccta gaaaccttac cagaaaatgg 180
 ggactgggta gggaaggaaa cttaaaagat caacaaactg ccagcccacg gactgcagag 240
 gctgtcacag ccagatgggg tggccagggt gccacaaacc caaagcaaag tttcaaaata 300
 atataaaatt taaaaagttt tgtacataag ctattcaaga tttctccagc actgactgat 360
 acaaagcaca attgagatgg cacttctaga gacagcagct tcaaaccacg aaaagggtga 420
 tgagatgaag tttcacatgg ctaaatcagt ggcaaaaaca cagtcttctt tctttctttc 480
 tttcaaggan gcaggaaaagc aattaagtgg tcaccttaac ataaggggga c 531

<210> 139
 <211> 521
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(521)
 <223> n = A,T,C or G

<400> 139
 tgggtgggca ccatggctgg gatcaccacc atcgaggcgg tgaagcgcaa gatccaggtt 60
 ctgcagcagc aggcagatga tgcagaggag cgagctgagc gcctccagcg agaagttgag 120
 ggagaaaaggc gggcccggga acaggctgag gctgaggtgg cctccttgaa ccgtaggatc 180
 cagctggttg aagaagagct ggaccgtgct caggagcgcc tggccactgc cctgcaaaaag 240
 ctggaagaag ctgaaaaagc tgctgatgag agtgagagag gtatgaaggt tattgaaaac 300
 cgggccttaa aagatgaaga aaagatggaa ctccaggaaa tccaactcaa agaagctaag 360
 cacattgcag aagaggcaga taggaagtat gaagaggtgg ctcgtaagtt ggtgatcatt 420
 gaaggagact tggaaccgca cagaaggaaac gagcttgagc ttggcaaaaag tcccgttgcc 480
 cagagatggg atgaaccaga ttagactgat ggaccanaac c 521

<210> 140
 <211> 571
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(571)
 <223> n = A,T,C or G

<400> 140
 aggggcnegc ggtgcgtggg ccactgggtg accgacttag cctggccaga ctctcagcac 60
 ctggaagcgc cccgagagtg acagcgtgag gctgggaggg aggacttggc ttgagcttgt 120
 taaactctgc tctgagcctc cttgtcgctt gcatttagat ggctcccgca aagaaggggtg 180
 gcgagaagaa aaagggccgt tctgccatca acgaagtggg aacccgagaa tacaccatca 240
 acattcacaa gcgcattccat ggagtgggct tcaagaagcg tgcacctcgg gactcaaaag 300
 agattcggaa atttgccatg aaggagatgg gaactccaga tgtgcgcatt gacaccaggc 360
 tcaacaaagc tgtctggggc aaaggaataa ggaatgtgcc ataccgaatc cgggtgtgcgg 420
 ctgtccagaa aacgtaatat ggatgaagat tcaccaaata agctatatac tttggttacc 480
 tatgtacctg ttaccacttt caaaaatcta cagacagtca atgtggatga gaactaatcg 540
 ctgatcgtca gatcaaataa agttataaaa t 571

<210> 141
 <211> 531
 <212> DNA
 <213> Homo sapien

<400> 141
 tcgggagcca cacttgggcc tcttcctctc caaagsgcca gaacctcctt ctctttggag 60
 aatggggagg cctcttgagg acacagaggg ttacaccttg gatgacctct agagaaattg 120
 cccaagaagc ccaccttctg gtcccaacct gcagaccca cagcagtcag ttggtcaggc 180
 cctgctgtag aaggtcactt ggctccattg cctgcttcca accaatgggc aggagagaag 240
 gcctttattt ctgcgccacc cattcctcct gtaccagcac ctccgttttc agtcagtgtt 300
 gtccagcaac ggtaccgttt acacagtcac ctccagacaca ccatttcacc tcccttgcca 360
 agctgttagc cttagagtga ttgcagtga cactgtttac acaccgtgaa tccattccca 420
 tcagtcatt ccagttggca ccagcctgaa ccatttggtta cctgggtgta actggagtc 480
 tgtttacaag gtggagtcgg ggcttgctga cttctcttca ttgagggca c 531

<210> 142
 <211> 491
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(491)
 <223> n = A,T,C or G

<400> 142
 acctagacag aaggtgggtg agggaggact ggtaggaggc tgaggcaatt ccttggtagt 60
 ttgtcctgaa accctactgg agaagtcagc atgaggcacc tactgagaga agtgcccaga 120
 aactgctgac tgcactctgtt aagagttaac agtaaagagg tagaagtgtg tttctgaatc 180
 agagtggaag cgtctcaagg gtcccacagt ggaggtccct gagctacctc ccttcctgga 240
 gtgggaagag tgaagcccat gaagaactga gatgaagcaa ggatgggggtt cctgggctcc 300
 aggcaagggc tgtgctctct gcagcaggga gcccacagag tcagaagaaa agaactaatc 360
 atttgttgca agaaaccttg cccggatact agcggaaaac tggaggcggn ggtgggggca 420
 caggaaagtg gaagtgattt gatggagagc agagaagcct atgcacagtg gccgagtcca 480
 cttgtaaatg g 491

<210> 143
 <211> 515
 <212> DNA
 <213> Homo sapien

<400> 143
 ttcaagcaat tgtaacaagt atatgtagat tagagtgagc aaaatcatat acaattttca 60
 tttccagttg ctattttcca aattgttctg taatgtcgtt aaaattactt aaaaattaac 120
 aaagccaaaa attatatatta tgacaagaaa gccatcccta cattaatctt acttttccac 180
 tcaccggccc atctccttcc tctttttcct aactatgcca ttaaaaactgt tctactgggc 240
 cgggcggtgtg gctcatgcct gtaatcccag cattttggga ggccaaggca ggcggatcat 300
 gaggtcaaga gattgagacc atcctggcca acatggtgaa accccgcctc gactaagaat 360
 acaaaaatta gctgggcatg gtggcgcatg cctgtagtct cagctactcg ggaggctgag 420
 gcagaagaat cgcttgaacc cgggaggcag aggatgcagt gagccccgat cgcgccactg 480
 cactctagcc tgggcgacag actgagactc tgctc 515

<210> 144
 <211> 340
 <212> DNA
 <213> Homo sapien

<400> 144
 tgtgccagtc tacaggccta tcagcagcga ctcccttcagc aacagatggg gtccccctgtt 60
 cagcccaacc ccatgagccc ccagcagcat atgctcccaa atcaggccca gtccccacac 120
 ctacaaggcc agcagatccc taattctctc tccaatcaag tgcgctctcc ccagcctgtc 180
 ccttctccac ggccacagtc ccagccccc cactccagtc cttccccaag gatgcagcct 240
 cagccttctc cacaccacgt ttccccacag acaagttccc cacatcctgg actggtagtt 300
 gcccaggcca accccatgga acaagggcat tttgccagcc 340

<210> 145
 <211> 630
 <212> DNA
 <213> Homo sapien

<400> 145

tgtaaaaact	tgtttttaat	tttgtataaa	ataaagggtgg	tccatgcccc	cgggggctgt	60
aggaaatcca	agcagaccag	ctgggggtggg	gggatgtagc	ctacctcggg	ggactgtctg	120
tcctcaaaac	gggctgagaa	ggcccgtcag	ggggccaggt	cccacagaga	ggcctgggat	180
actccccaa	cccagggggc	agactgggca	gtggggagcc	cccatcgtgc	cccagaggtg	240
gccacaggct	gaaggagggg	cctgaggcac	cgcagcctgc	aacccccagg	gctgcagtcc	300
actaactttt	tacagaataa	aaggaacatg	gggatgggga	aaaaagcacc	aggtcaggca	360
gggcccagag	gccccagatc	ccaggagggc	caggactcag	gatgccagca	ccaccttagc	420
agctcccaca	gctcctggca	caggaggccg	ccacggattg	gcacaggccg	ctgctggcca	480
tcacgccaca	tttgaggaaac	ttgtcccagc	agaggtcagc	tcggaggagc	tcctcgtggg	540
cacacactgt	acgaacacag	atctccttgt	taatgacgta	cacacggcgg	aggctgcggg	600
gacagggcac	gggaggtctc	agccccactt				630

<210> 146

<211> 521

<212> DNA

<213> Homo sapien

<400> 146

atggctgctg	gatttaggtg	gtaatagggg	ctgtgggcca	taaactctgaa	gccttgagaa	60
ccttgggctc	ggagagccat	gaagagggaa	ggaaaagagg	gcaagtctctg	aacctaacca	120
atgacctgat	ggattgctcg	accaagacac	agaagtgaag	tctgtgtctg	tgcaactccc	180
acagactgga	gtttttgggtg	ctgaatagag	ccagttgcta	aaaaattggg	ggtttgggtga	240
agaaatctga	ttgtttgtgtg	tattcaatgt	gtgattttta	aaataaacag	caacaacaat	300
aaaaaccctg	actggtgtgt	ttttccctgt	attcttttaca	actatTTTTT	gaccctctga	360
aaattattat	acttcaccta	aatggaagac	tgtctgtgtt	gtggaaattt	tgtaatTTTT	420
taatttattt	tattctctct	ccttttttatt	ttgcctgcag	aatccgttga	gagacraata	480
aggcttaata	tttaattgat	ttgtttaata	tgtatataaa	t		521

<210> 147

<211> 562

<212> DNA

<213> Homo sapien

<400> 147

ggcatgcgag	cgcactcggc	ggacgcaagg	gcggcgggga	gcacacggag	cactgcaggc	60
gccgggttgg	gacagcgtct	tgcgtgctgc	tggatagtcg	tgttttcggg	gatcgaggat	120
actcaccaga	aaccgaaaat	gccgaaacca	atcaatgtcc	gagttaccac	catggatgca	180
gagctggagt	ttgcaatcca	gccaaataca	actggaaaac	agctttttga	tcagggtgga	240
aagactatcg	gcctccggga	agtgtggtac	tttggcctcc	actatgtgga	taataaagga	300
tttcctacct	ggctgaagct	ggataaqaag	gtgtctgccc	aggaggtcag	gaaggagaat	360
cccctccagt	tcaagttccg	ggccaaaagt	ctaccctgaa	gatgtggctg	aggagctcat	420
ccaggacatc	accagaaaac	ttttcttctt	tcaagtgaag	gaaggaaatcc	ttagcgatga	480
gatctactgc	cccccttgat	actgccgtgc	tcttgggggtc	ctacgcttgt	gcatgccaaag	540
tttggggact	accaccaaga	ag				562

<210> 148

<211> 820

<212> DNA

<213> Homo sapien

<400> 148

gaaggagtgc	ggatactcag	cattgatgca	ccccaatctc	aaagcggcat	tcttcggcag	60
gtctctggga	caatctctag	ggtcactacc	tggaaactcg	ttagggatca	actgaatgct	120
gaaaggaaaag	aacacctgca	gaaccggaca	gaaattcacc	ccggcgatca	gctgattgat	180

ctcgggtcgac	cagaagtcac	ggctaaagat	gacgaggacg	ttgtcaattc	cctgggcttt	240
tcgaagttag	tccagcagca	gtctgaggta	ttcggggccg	ttatgcacct	ggaccaccag	300
caccagctcc	cgggggggccc	aggtgccagc	cttatctaca	ttcctcagg	tctgatcaaa	360
gttcagctgg	tacaccagg	accggtaccg	cagcgtcagg	ttgtccgctc	gggctggggg	420
accgccggga	ccagggaagc	cgccgacacg	ttggagaccc	tgccgatgcc	cacagccaca	480
gaggggtggt	ccccaccg	gccgcggca	ccccgcgcg	gttcggcgctc	cagcaacggt	540
ggggcgaggg	cctcggttctt	cctttgtcgc	ccattgctgc	tccagaggac	gaagccgcag	600
gcggccacca	cgagcgtcag	gattagcacc	ttccggttgt	agatgcggaa	cctcatggctc	660
tccagggccg	ggagcgcagc	tacagctcga	gcgtcggcgc	cgccgctagg	agccgcggct	720
cggttcgtc	tccgtcctct	ccattcagca	ccacgggtcc	cggaaaaagc	tcagccscgg	780
tcccaaccgc	accctagctt	cgttacctgc	gcctcgcttg			820

<210> 149

<211> 501

<212> DNA

<213> Homo sapien

<400> 149

cagattttta	tttgacgtcg	tactggggc	cgtttcttgc	tgcttatttg	tctgctagcc	60
tgctcttcca	gctgcatggc	caggcgcaag	gccttgatga	catctcgcag	ggctgagaaa	120
tgcttggtt	gctgggccag	agcagattcc	gctttgttca	caaaggctctc	caggctcatag	180
tctggctgct	cggtcatctc	agagagctca	agccagctctg	gtccttgctg	tatgatctcc	240
ttgagctctt	ccatagcctt	ctcctccagc	tcctgatct	gagtcatggc	ttcgttaaag	300
ctggacatct	gggaagacag	ttcctcctct	tccttgata	aattgcctgg	aatcagcgcc	360
ccgttagagc	aggcttccat	ctcttctgtt	tccatttgaa	tcaactgctc	tccactgggc	420
ccactgtggg	ggctcagctc	cttgaccctg	ctgcatatct	taagggtgtt	taaaggatat	480
tcacaggagc	ttatgcctgg	t				501

<210> 150

<211> 511

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(511)

<223> n = A,T,C or G

<400> 150

ctcctcttgg	tacatgaacc	caagttgaaa	gtggacttaa	caaagtatct	ggagaaccaa	60
gcattctgct	ttgactttgc	atttgatgaa	acagcttcga	atgaagttgt	ctacaggttc	120
acagcaaggc	cactggtaca	gacaatcttt	gaagggtggaa	aagcaacttg	ttttgcatat	180
ggccagacag	gaagtggcaa	gacacatact	atgggcggag	acctctctgg	gaaagcccag	240
aatgcatcca	aagggtatcta	tgccatggcc	ttccgggacg	tcttcttctg	aagaatcaac	300
cctgctaccg	gaagttgggc	ctggaagtct	atgtgacatt	cttcgagatc	tacaatggga	360
agctgtttga	cctgctcaac	aagaaggcca	agcttgccgcg	tgctggaaga	cggcaagcaa	420
caggtgcaag	tggtgggggc	ttgcaggaac	atctggntaa	ctctgcttga	tgatggcant	480
caagatgatc	gacatgggca	gcgcctgcag	a			511

<210> 151

<211> 566

<212> DNA

<213> Homo sapien

<400> 151

tcccgaattc	aagcgacaaa	ttggawagt	aaatggaaga	tgcctatcat	gaacatcagg	60
caaattcttt	gcgccaagat	ctgatgagac	gacaggaaga	attaagacgc	atggaagaac	120
ttcacaatca	agaaatgcag	aaacgtaaag	aaatgcaatt	gaggcaagag	gaggaacgac	180
gtagaagaga	ggaagagatg	atgattcgtc	aacgtgagat	ggaagaacaa	atgaggcgcc	240
aaagagagga	aagttacagc	cgaatgggct	acatggatcc	acgggaaaga	gacatgcgaa	300
tgggtggcgg	aggagcaatg	aacatgggag	atccctatgg	ttcaggaggc	cagaaatttc	360
cacctctagg	aggtggtggt	ggcatagggt	atgaagctaa	tcctggcggt	ccaccagcaa	420
ccatgagtgg	ttccatgatg	ggaagtgaca	tgcgtactga	gcgctttggg	cagggaggtg	480
cggggcctgt	gggtggacag	ggtcctagag	gaatggggcc	tggaactcca	gcaggatatg	540
gtagagggag	agaagagtac	gaaggc				566

<210> 152

<211> 518

<212> DNA

<213> Homo sapien

<400> 152

ttcgtgaaga	cctgactgg	taagaccatc	actctcgaag	tggagcccga	gtgacaccat	60
tgagaatgtc	aaggcaaaaga	tccaagacaa	ggaaggcatc	cctcctgacc	agcakagggt	120
gatctttgct	gggaaacagc	tggaagatgg	acgcaccctg	tctgactaca	acatccagaa	180
agagtccacc	ctgcacctgg	tgcctccgtc	cagagggtgg	atgcaaactc	tcgtgaagac	240
cctgactggg	aagaccatca	ccctcgaggt	ggagcccagt	gacaccatcg	agaatgtcaa	300
ggcaaagatc	caagataagg	aaggcatccc	tcctgatcag	cagagggtga	tctttgctgg	360
gaaacagctg	gaagatggac	gcaccctgtc	tgactacaac	atccagaaaag	agtccactct	420
gcacttggtc	ctgcgcttga	gggggggtgt	ctaagtttcc	ccttttaagg	tttcaacaaa	480
tttcattgca	ctttcctttc	aataaagttg	ttgcattc			518

<210> 153

<211> 542

<212> DNA

<213> Homo sapien

<400> 153

gcgcgggtgc	gtggggccact	gggtgaccga	cttagcctgg	ccagactctc	agcacctgga	60
agcgccccga	gagtgcacgc	gtgaggctgg	gagggaggac	ttggcttgag	cttggttaaac	120
tctgctctga	gcctccttgt	cgcctgcatt	tagatggctc	ccgcaaagaa	gggtggcgag	180
aagaaaaagg	gccgttctgc	catcaacgaa	gtggttaacc	gagaatacac	catcaacatt	240
cacaagcgca	tccatggagt	gggcttcaag	aagcgtgcac	ctcgggcaact	caaagagatt	300
cggaaatttg	ccatgaagga	gatgggaact	ccagatgtgc	gcattgacac	caggctcaac	360
aaagctgtct	gggccaaaagg	aataaggaat	gtgccatacc	gaatccgtgt	gcggtgtgtc	420
agaaaacgta	atgaggatga	agattcacca	aataagctat	atactttggt	tacctatgta	480
cctgttacca	ctttcaaaaa	tctacagaca	gtcaatgtgg	atgagaacta	atcgtgtatc	540
gt						542

<210> 154

<211> 411

<212> DNA

<213> Homo sapien

<400> 154

aattctttat	ttaaataaac	aaactcatct	tcctcaagcc	ccagaccatg	gtaggcagcc	60
ctccctctcc	atccccctac	ccccccctt	agccacagtg	aagggaatgg	aaaatgagaa	120
gccacgaggg	cccttgccag	ggaaggctgc	cccagatgtg	tggtgagcac	agtcagtgca	180
gctgtggctg	gggcagcagc	tgccacaggc	tcctccctat	aaattaagtt	cctgcagcca	240
cagctgtggg	agaagcatat	ttgtagaagc	aaggccagtc	cagcatcaga	aggcagaggc	300

```

agcatcagtg actcccagcc atggaatgaa cggaggacac agagctcaga gacagaacag      360
gccaggggga agaaggagag acagaatagg ccagggcatg gcggtgaggg a                411

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<210> 155

<211> 421

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(421)

<223> n = A,T,C or G

<400> 155

```

tgatgaatct ggggtgggctg gcagtagccc gagatgatgg gctcttctct ggggatccca      60
actggttccc taagaaatcc aaggagaatc ctcggaactt ctcgataac cagctgcaag      120
agggcaagaa cgtgatcggg ttacagatgg gcaccaaccg cggggcgtct cangcaggca      180
tgactggcta cgggatgcca cgccagatcc tctgatccca ccccaggcct tgcccctgcc      240
ctcccacgaa tggttaatat atatgtagat atatatttta gcagtacat tcccagagag      300
ccccagagct ctcaagctcc tttctgtcag ggtggggggg tcaagcctgt cctgtcacct      360
ctgaagtgcc tgctggcatc ctctcccca tgcttactaa tacattccct tcccatagc      420
c                                                                                   421

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<210> 156

<211> 670

<212> DNA

<213> Homo sapien

<400> 156

```

agcggagctc cctcccctgg tggctacaac ccacacacgc caggctcagg catcgagcag      60
aactccagcg actgggtaac cactgacatt cagggtgaagg tgcgggacac ctacctggat      120
acacaggtgg tgggacagac aggtgtcatc cgcagtgtea cggggggcat gtgctctgtg      180
tacctgaagg acagtgaaga ggttgtcagc atttccagtg agcacctgga gcctatcacc      240
cccaccaaga acaacaaggt gaaagtgatc ctgggcgagg atcgggaagc cacgggcgtc      300
ctactgagca ttgatggtga ggatggcatt gtccgtatgg acctgatga gcagctcaag      360
atcctcaacc tccgcttccct ggggaagctc ctggaagcct gaagcaggca gggccggtgg      420
acttcgtcgg atgaagagtg atcctccttc cttccctggc ccttggctgt gacacaagat      480
cctcctgcag gcttaggcgg attgttctgg atttcctttt gttttcctt ttaggtttcc      540
atcttttccc tccctgggtc tcattggaat ctgagtagag tctgggggag ggtccccacc      600
ttcctgtacc tccctccccc agcttgcttt tgttgtaccg tctttcaata aaaagaaqct      660
gtttggtcta                                                                                   670

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<210> 157

<211> 421

<212> DNA

<213> Homo sapien

<400> 157

```

ggttcacagc actgctgctt gtgtgttgcc ggccaggaat tccaggetca caaggctatc      60
ttagcagctc gttctccggt ttttagtgcc atgtttgaac atgaaatgga ggagagcaaa      120
aagaatcgag ttgaaatcaa tgatgtggag cctgaagttt ttaaggaaat gatgtgcttc      180
atttacacgg ggaaggctcc aaacctcgac aaaatggctg atgatttgct ggcagctgct      240
gacaagtatg ccctggagcg cttaaaggtc atgtgtgagg atgccctctg cagtaacctg      300
tccgtggaga acgctgcaga aattctcatc ctggccgacc tccacagtgc agatcagttg      360
aaaactcagg cagtggattt catcaactat catgcttcgg atgtcttgga gacctcttgg      420

```

g

421

<210> 158
 <211> 321
 <212> DNA
 <213> Homo sapien

<400> 158
 tcgtagccat ttttctgctt ctttggagaa tgacgccaca ctgactgctc attgtcgttg 60
 gttccatgcc aattggtgaa atagaacctc atccggtagt ggagccggag ggacatcttg 120
 tcatcaacgg tgatggtgag atttggagca taccagagct tgggtgttctc gccatacagg 180
 gcaaagaggt tgtgacaaag aggagagata cggcatgcct gtgcagccct gatgcacagt 240
 tcctctgctg tgtactctcc actgccccagc cggaggggct cctgttccga cagatagaag 300
 atcacttcca cccctggctt g 321

<210> 159
 <211> 596
 <212> DNA
 <213> Homo sapien

<400> 159
 tggcacactg ctcttaagaa actatgawga tctgagattt ttttgtgtat gtttttgact 60
 cttttgagtg gtaatcatat gtgtctttat agatgtacat acctccttgc acaaattggag 120
 ggggaattcat tttcatcact gggagtgtcc ttagtgtata aaaaccatgc tggatatagg 180
 cttcaagttg taaaaatgaa agtgacttta aaagaaaata ggggatgggc caggatctcc 240
 actgataaga ctgttttttaa gtaacttaag gacctttggg tctacaagta tatgtgaaaa 300
 aaatgagact tactgggtga ggaaattcat tgtttaaaga tggtcgtgtg tgtgtgtgtg 360
 tgtgtgtgtg ttgtgtttgtg ttttgttttt taagggaggg aatttattat ttaccgttgc 420
 ttgaaattac tgkgtaaata tatgtytgat aatgatttgc tytttgvcma ctaaaattag 480
 gvctgtataa gtwtaratg cmtccctggg kgttgatytt ccmagatatt gatgatamcc 540
 cttaaaattg taaccygcct ttttcccttt gctytcmatl aaagtctatt cmaaag 596

<210> 160
 <211> 515
 <212> DNA
 <213> Homo sapien

<400> 160
 gggggtaggc tctttattag acggttattg ctgtactaca gggtcagagt gcagtgtaaag 60
 cagtgtcaga ggcccgcgtt cagcccaaga atgtggattt tctctcccta ttgatcacag 120
 tgggtgggtt tcttcagaaa agccccagag gcagggacca gtgagctcca aggttagaag 180
 tggaactgga aggcttcagt cacatgctgc ttccacgctt ccaggctggg cagcaaggag 240
 gagatgccca tgacgtgcca ggtctcccca tctgacacca gtgaagtctg gtaggacagc 300
 agccgcacgc ctgcctctgc caggaggcca atcatggtag gcagcattgc agggtcagag 360
 gtctgagtcc ggaataggag caggggcagg tccctgcgga gaggcacttc tggcctgaag 420
 acagctccat tgagcccctg cagtacaggy gtagtgcctt ggaccaagcc cacagcctgg 480
 taaggggagc ctgccagggc cacggccagg aggca 515

<210> 161
 <211> 936
 <212> DNA
 <213> Homo sapien

<400> 161
 taattttctta gtcgtttgga atccttaagc atgcaaaagc tttgaacaga agggttcaca 60

aaggaaccag	ggttggttta	tggcatccag	ttaagccaga	gctgggaatg	cctctgggtc	120
atccacatca	ggagcagaag	cacttgactt	gtcggtcctg	ctgccacggt	ttggggcgccc	180
accacgcccc	cgtccacctc	gtcctccctt	gccgccacgt	cctgggcggc	caaggtctcc	240
aaaattgac	tccagctgag	acgttatatc	atttgctggc	ttccggaaat	gatgggtccat	300
aaccgaatct	tcagcatgag	cctcttcact	ctttgattta	tgaagaacaa	atcccttctt	360
ccactgcccc	tcagcacctt	catttggttt	tcggatatta	aattctactt	ttgcccgggtc	420
cttattttga	atagccttcc	actcatccaa	agtcactctt	tttgaccctt	cctcttttac	480
ctcttcaact	tcattctcct	tattttcagt	gtctgccact	ggatgatgtt	cttcaccttc	540
aggtgtttcc	tcagtcacat	ttgattgac	caagtcagtt	aattcgtctt	tgacagttcc	600
ccagttgtga	gacccgctac	ctccacgttt	gtcctcgtgc	ttcaggccag	atctatcact	660
tccactatgc	ctatcaaatt	cacgtttgcc	acgagaatca	aatccatctc	ctcggcccat	720
tccacgtcca	cggccccctc	gacctcttcc	aagaccacca	cgacctcgaa	taggtcgggtc	780
aataatcggt	ctatcaactg	aaaattcgcc	tccttcaccc	ttttcttcaa	gtggcttttc	840
gaatcttcgt	tcacgaggtg	gtcgcttttc	tggtcttcta	tcaattattt	tcccttcacc	900
ctgaagttgt	tgatcaggtc	ttcttccaac	tcgtgc			936

<210> 162

<211> 950

<212> DNA

<213> Homo sapien

<400> 162

aagcggatgg	acctgagtca	gccgaatcct	agcccccttc	cttgggcctg	ctgtggtgct	60
cgacatcagt	gacagacgga	agcagcagac	catcaaggct	acgggaggcc	cggggcgctt	120
gcgaagatga	agtttggtg	cctctccttc	cggcagcctt	atgctggctt	tgtcttaaatt	180
ggaatcaaga	ctgtggagac	gcgctggcgt	cctctgctga	gcagccagcg	gaactgtacc	240
atcgccgtcc	acattgctca	cagggactgg	gaaggcagtg	cctgtcggga	gctgctggtg	300
gagagactcg	ggatgactcc	tgctcagatt	caggccttgc	tcaggaaagg	ggaaaagtgt	360
ggtcgaggag	tgatagcggg	actcgttgac	attggggaaa	ctttgcaatg	ccccgaagac	420
ttaactccc	atgaggttgt	ggaactagaa	aatcaagctg	cactgaccaa	cctgaagcag	480
aagtacctga	ctgtgatctc	aaaccccagg	tggttactgg	agcccatacc	taggaaagga	540
ggcaaggatg	tattccaggt	agacatccca	gagcacctga	tccctttggg	gcatgaagtg	600
tgacaagtgt	gggctcctga	aaggaatgtt	ccrgagaaac	cagctaaatc	atggcacctt	660
caatttgcca	tcgtgacgca	gacctgtata	aattaggtta	aagatgaatt	tccactgctt	720
tggagagtcc	caccacttaa	gcactgtgca	tgtaaacagg	ttcctttgct	cagatgaagg	780
aagtaggggg	tggggctttc	cttgtgtgat	gcctccttag	gcacacaggc	aatgtctcaa	840
gtactttgac	cttagggtag	aaggcaaaag	tgccagtaaa	tgtctcagca	ttgtctgctaa	900
ttttggtcct	gctagtttct	ggattgtaca	aataaatgtg	ttgtagatga		950

<210> 163

<211> 475

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(475)

<223> n = A,T,C or G

<400> 163

tcgagcggcc	gccccggcag	gtgtcggagt	ccagcacggg	aggcgtgggtc	ttgtagtgtt	60
tctccggctg	cccattgtct	tcccactcca	cggcgatgtc	gctgggatag	aagcctttga	120
ccaggcaggt	caggtgacc	tggttcttgg	tcattctctc	ccgggatggg	ggcaggggtg	180
acacctgtgg	ttctcggggc	tgccctttgg	ctttggagat	ggttttctcg	atgggggctg	240
ggagggcttt	gttggagacc	ttgcacttgt	actccttgcc	attcaaccag	tcctggtgca	300

ngacgggtgag	gacgctnacc	acacgggtacg	ngctgggtgta	ctgctcctcc	cgcggctttg	360
tcttggcatt	atgcacctcc	acgccgtcca	cgtaccaatt	gaacttgacc	tcagggtctt	420
cgtggctcac	gtccaccacc	acgcatgtaa	cctcaaanct	cggncgcgan	cacgc	475

<210> 164
 <211> 476
 <212> DNA
 <213> Homo sapien

<400> 164						
agcgtgggtcg	cggccgaggt	ctgaggttac	atgcgtgggtg	gtggacgtga	gccacgaaga	60
ccctgaggtc	aagttcaact	ggtacgtgga	cggcgtggag	gtgcataatg	ccaagacaaa	120
gccgcgggag	gagcagtaca	acagcacgta	ccgtgtgggtc	agcgtcctca	ccgtcctgca	180
ccaggactgg	ctgaatggca	aggagtacaa	gtgcaagggtc	tccaacaaaag	ccctcccagc	240
ccccatcgag	aaaacctct	ccaaagccaa	agggcagccc	cgagaaccac	aggtgtacac	300
cctgccccca	tcccgggagg	agatgaccaa	gaaccaggtc	agcctgacct	gcctggtcaa	360
aggcttctat	cccagcgaca	tcgcccgtgg	agtgggagag	caatgggcag	ccggagaaca	420
actacaagac	cacgcctccc	gtgctggact	ccgacacctg	ccgggcggcc	gctcga	476

<210> 165
 <211> 256
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(256)
 <223> n = A,T,C or G

<400> 165						
agcgtgggttn	cggccgaggt	cccaaccaag	gctgcancct	ggatgccatc	aaagtcttct	60
gcaacatgga	gactgggtgag	acctgcgtgt	acccactca	gccagtggtg	gcccagaaga	120
actggtacat	cagcaagaac	cccaaggaca	agaggcatgt	ctggttcggc	gagagcatga	180
ccgatggatt	ccagttcgag	tatggcggcc	agggctccga	ccctgccgat	gtggacctgc	240
ccgggcggnc	gctcga					256

<210> 166
 <211> 332
 <212> DNA
 <213> Homo sapien

<400> 166						
agcgtgggtcg	cggccgaggt	caagaacccc	gcccgcacct	gccgtgacct	caagatgtgc	60
cactctgact	ggaagagtgg	agagtactgg	attgacccca	accaaggctg	caacctggat	120
gccatcaaag	tcttctgcaa	catggagact	ggtgagacct	gcgtgtaccc	cactcagccc	180
agtgtggccc	agaagaactg	gtacatcagc	aagaacccca	aggacaagag	gcattgtctgg	240
ttcggcgaga	qcatgaccga	tggattccag	ttcgagtatg	gcggccaggg	ctccgaccct	300
gccgatgtgg	acctgcccgg	gcggccgctc	ga			332

<210> 167
 <211> 332
 <212> DNA
 <213> Homo sapien

<220>

<221> misc_feature
 <222> (1)...(332)
 <223> n = A,T,C or G

<400> 167
 tcgagcgggtc gcccgggcag gtccacatcg gcagggtcgg agccctggcc gccatactcg 60
 aactggaatc catcggnat gctctcgccg aaccagacat gcctcttgnc cttgggggttc 120
 ttgctgatgt accagntctt ctggggccaca ctgggctgag tgggggtacac gcagggtctca 180
 ccantctcca tgttgcanaa gactttgatg gcatccagggt tgcagccttg gttgggggtca 240
 atccagtact ctccactctt ccagacagag tggcacatct tgagggtcacg gcagggtcgg 300
 gcgggggttct tgacctcggg cgcgaccacg ct 332

<210> 168
 <211> 276
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(276)
 <223> n = A,T,C or G

<400> 168
 tcgagcggcc gcccgggcag gtccctctca gagcggtagc tgttcttatt gccccggcag 60
 cctccataga tnaagttatt gcangagttc ctctccacgt caaagtacca gcgtgggaag 120
 gatgcacggc aaggcccagt gactgcgttg gcggtgcagt attcttcata gttgaacata 180
 tcgctggagt ggacttcaga atcctgcctt ctgggagcac ttgggacaga ggaatccgct 240
 gcattctctg tggtggacct cggccgcgac cacgct 276

<210> 169
 <211> 276
 <212> DNA
 <213> Homo sapien

<400> 169
 agcgtgggtc cggccgaggt ccaccagcag gaatgcagcg gattcctctg tcccaagtgc 60
 tcccagaagc caggattctg aagaccactc cagcgatatg ttcaactatg aagaatactg 120
 caccgccaac gcagtcactg ggccttgccg tgcaccttc ccacgtgggt actttgacgt 180
 ggagaggaac tcttgcaata acttcatcta tggaggctgc cggggcaata agaacagcta 240
 ccgctctgag gaggacctgc ccgggcggcc gctcga 276

<210> 170
 <211> 332
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(332)
 <223> n = A,T,C or G

<400> 170
 tcgagcggcc gcccgggcag gtccacatcg gcagggtcgg agccctggcc gccatactcg 60
 aactggaatc catcggtcat gctctcgccg aaccagacat gcctcttgtc cttgggggttc 120
 ttgctgatgt accagttctt ctggggccaca ctgggctgag tgggggtacac gcagggtctca 180

ccagtcctcca	tgttgacagaa	gactttgatg	gcacccaggt	tgcagccttg	gttgggggtca	240
atccagtact	ctccactctt	ccagccagaa	tggcacatct	tgaggtcacg	gcangtgagg	300
gcgggggtct	tgacctcggc	cgcgaccacg	ct			332

<210> 171
 <211> 333
 <212> DNA
 <213> Homo sapien

<400> 171						
agcgtgggtcg	cggccgaggt	caagaaaccc	cgcccgaccc	tgccgtgacc	tcaagatgtg	60
ccactctggc	tggaaagagt	gagagtactg	gattgacccc	aaccaaggct	gcaacctgga	120
tgccatcaaa	gtcttctgca	acatggagac	tggtagagacc	tgcgtgtacc	ccactcagcc	180
cagtgtggcc	cagaagaact	ggtacatcag	caagaacccc	aaggacaaga	ggcatgtctg	240
gctcggcgag	agcatgaccg	atggattcca	gttcgagtat	ggcggccagg	gctccgaccc	300
tgccgatgtg	gacctgcccg	ggcggccgct	cga			333

<210> 172
 <211> 527
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(527)
 <223> n = A,T,C or G

<400> 172						
agcgtgggtcg	cggccgaggt	cctgtcagag	tggcactggg	agaagntcca	ggaaccctga	60
actgtaaggg	ttcttcatca	gtgccaacag	gatgacatga	aatgatgtac	tcagaagtgt	120
cctgnaatgg	ggcccatgan	atggttgnet	gagagagagc	ttcttgcctt	acattcggcg	180
ggtatgggtct	tggcctatgc	cttatggggg	tggccgttgn	gggagggtng	gtccgcctaa	240
aacctatgtt	ctcaaagatc	atgtgttgcc	caacactggg	ttgctgacca	naagtgccag	300
gaagctgaat	accatttcca	gtgtcatacc	cagggtgggt	gacgaaaggg	gtctttttaa	360
ctgtggaagg	aacatccaa	atctctgntc	catgaagatt	gggggtgtga	agggttacca	420
gttgggggaag	ctcgtgtgtt	ttttccttcc	aatcangggc	tcgctcttct	gaatattctt	480
cagggcaatg	acataaattg	tatatctcgt	tcccggttcc	aggccag		527

<210> 173
 <211> 635
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(635)
 <223> n = A,T,C or G

<400> 173						
tcgagcgggc	gcccgggca	gtccaccaca	cccaattcct	tgctgggtatc	atggcagccg	60
ccacgtgcca	ggattaccgg	ctacatcatc	aagtatgaga	agcctgggtc	tcctcccaga	120
gaagtgggtc	ctcggccccg	ccctgggtgc	acagaggcta	ctattactgg	cctggaaccg	180
ggaaccgaat	atacaattta	tgtcattgcc	ctgaagaata	atcagaagag	cgagcccctg	240
attggaagga	aaaagacaga	cgagcttccc	caactggtaa	cccttcacac	ccccaattct	300
catggaccag	agatcttgga	tgttccttcc	acagttcaaa	agaccctttt	cgtcaccac	360

cctgggtatg	acactggaaa	tggatttcag	cttcctggca	cttctgggtca	gcaacccagt	420
gttgggcaac	aaatgatctt	tgangaacat	ggnttttaggc	ggaccacacc	ggccacaacg	480
ggcaccacca	taaggcatag	gccaagaaca	taccgncga	atgtaggaca	agaagctctn	540
tctcanacaa	ncatctcatg	ggccccattc	cangacactt	ctgagtacat	canttcattg	600
catcctggtg	gcactgataa	aaacccttac	agtta			635

<210> 174

<211> 572

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(572)

<223> n = A,T,C or G

<400> 174

agcgtggtcg	cgggcgaggt	cctgtcagag	tggcactggt	agaagttcca	ggaaccctga	60
actgtaagg	ttcttcatca	gtgccaacag	gatgacatga	aatgatgtac	tcagaagtgt	120
cctggaatgg	ggcccatgag	atggttgtct	gagagagagc	ttcttgtcct	acattcggcg	180
ggtatggtct	tggcctatgc	cttatggggg	tggccgttgt	gggcggtgtg	gtccgcctaa	240
aaccatgttc	ctcaaagatc	atttgttgcc	caacactggg	ttgctgacca	gaagtgccag	300
gaagctgaat	accatttcca	gtgtcatacc	cagggtgggt	gacgaaagg	gtcttttgaa	360
ctgtggaagg	aacatccaag	atctctggtc	catgaagatt	ggggtgtgga	agggttacca	420
gttggggaag	ctcgtctgtc	tttttccttc	caatcanggg	ctcgtctctc	tgattattct	480
tcagggcaat	gacataaatt	gtatatctcg	ntcccggtgn	cagccaataa	taataaccct	540
ctgtgacacc	anggcggggc	cgaaggancca	ct			572

<210> 175

<211> 372

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(372)

<223> n = A,T,C or G

<400> 175

agcgtggtcg	cggccgaggt	cctcaccaga	ggtaccacct	acaacatcat	agtggaggca	60
ctgaaagacc	agcagaggca	taaggttcgg	gaagaggttg	ttaccgtggg	caactctgtc	120
aacgaaggct	tgaaccaacc	tacggatgac	tcgtgctttg	accctacac	agtttcccat	180
tatgccgttg	gagatgagtg	ggaacgaatg	tctgaatcag	gctttaaact	gttgtgccag	240
tgcttanget	ttggaagtgg	tcattttcaga	tgtgattcat	ctagatgggt	ccatgacaat	300
ggtgtgaact	acaagattgg	agagaagtgg	gaccgtcagg	gagaaaatgg	acctgcccgg	360
gcggccgctc	ga					372

<210> 176

<211> 372

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(372)

<223> n = A,T,C or G

<400> 176

tcgagcggcc	gcccgggcag	gtccattttc	tccctgacgg	tcccacttct	ctccaatctt	60
gtagttcaca	ccattgtcat	ggcaccatct	agatgaatca	catctgaaat	gaccacttcc	120
aaagcctaag	cactggcaca	acagtttaaa	gcctgattca	gacattcggt	cccactcatc	180
tccaacggca	taatgggaaa	ctgtgtaggg	gtcaaagcac	gagtcacccg	taggttggtt	240
caagccttcg	ntgacagagt	tgcccacggt	aacaacctct	tcccgaacct	tatgcctctg	300
ctggtctttc	agtgcctcca	ctatgatgtt	gtaggtggta	cctctggtga	ggacctcggc	360
cgcgaccacg	ct					372

<210> 177

<211> 269

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(269)

<223> n = A,T,C or G

<400> 177

agcgtggccg	cggccgaggt	ccattggctg	gaacggcatc	aacttggaag	ccagtgatcg	60
tctcagcctt	ggttctccag	ctaattggtg	tggnggtctc	agtagcatct	gtcacacgag	120
cccttcttgg	tgggctgaca	ttctccagag	tggtgacaac	accctgagct	ggtctgcttg	180
tcaaagtgtc	cttaagagca	tagacactca	cttcatattt	ggcgnccacc	ataagtcctg	240
atacaaccac	ggaatgacct	gtcaggaac				269

<210> 178

<211> 529

<212> DNA

<213> Homo sapien

<400> 178

tcgagcggcc	gcccgggcag	gtcctcagac	cgggttctga	gtacacagtc	agtgtggttg	60
ccttgcaacga	tgatattggag	agccagcccc	tgattggaac	ccagtcacaca	gctattcctg	120
caccaactga	cctgaagtgc	actcagggtca	caccacaaag	cctgagcgcc	cagtggacac	180
cacccaatgt	tcagctcact	ggatattcgag	tgcggttgac	ccccaaaggag	aagaccggac	240
caatgaaaga	aatcaacctt	gtccttgaca	gtcatccgt	ggttgatatca	ggacttatgg	300
cggccacca	atatgaagtg	agtgtctatg	ctcttaagga	cactttgaca	agcagaccag	360
ctcaggggtg	tgtcaccact	ctggagaatg	tcagcccacc	aagaagggtc	cgtgtgacag	420
atgctactga	gaccaccatc	accattagct	ggagaaccaa	gactgagacg	atcactggct	480
tccaagttga	tgccgttcca	gccaatggac	ctcgcccgcg	accacgctt		529

<210> 179

<211> 454

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(454)

<223> n = A,T,C or G

<400> 179

```

agcgtgggtcg cggccgaggt ctggccgaac tgccagtgtg caggggaagat gtacatgtta      60
tagntcttct cgaagtcccg ggccagcagc tccacggggt ggtctcctgc ctccaggcgc      120
ttctcattct catggatctt cttcaccgcg agcttctgct tctcagtcag aaggttgttg      180
tcctcatccc tctcatacag ggtgaccagg acgttcttga gccagtcccg catgcgcagg      240
gggaattcgg tcagctcaga gtccaggcaa ggggggatgt atttgcaagg cccgatgtag      300
tccaagtgga gcttgtggcc cttcttggtg ccctccaagg tgcactttgt ggcaaagaag      360
tggcaggaag agtcgaaggt cttgttggtc ttgctgcaca ccttctcaaa ctcgccaatg      420
ggggctgggc agacctgccc gggcgggcgc tcga                                     454

```

<210> 180

<211> 454

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(454)

<223> n = A,T,C or G

<400> 180

```

tcgagcgggc gcccgggcag gtctgcccag cccccattgg cgagtttgag aaggngtgca      60
gcaatgacaa caagaccttc gactcttcct gccacttctt tgccacaaag tgcaccctgg      120
agggcaccaa gaagggccac aagctccacc tggactacat cgggccttgc aaatacatcc      180
ccccttgccct ggactctgag ctgaccgaat tccccctgcg catgcgggac tggctcaaga      240
acgtcctggt caccctgtat gagagggatg aggacaacaa cttctgact gagaagcana      300
agctgcgggt gaagaanatc catgagaatg anaagcgct gnaggcanga gaccaccccg      360
tggagctgct ggcccgggac ttcgagaaga actataacat gtacatcttc cctgtacact      420
ggcagttcgg ccagacctcg gccgcgacca cgct                                     454

```

<210> 181

<211> 102

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(102)

<223> n = A,T,C or G

<400> 181

```

agcgtggntg cggacgacgc ccacaaagcc attgtatgta gttttanttc agctgcaaan      60
aataccncca gcatccacct tactaaccag catatgcaga ca                               102

```

<210> 182

<211> 337

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(337)

<223> n = A,T,C or G

<400> 182

```

tcgagcggtc gcccgggcag gtctgggcgg atagcaccgg gcatattttg gaatggatga      60

```

ggtctggcac	cctgagcagc	ccagcagagga	cttgggtctta	ggtgagcaat	ttggctagga	120
ggatagtatg	cagcacgggt	ctgagtctgt	gggatagctg	ccatgaagna	acctgaagga	180
ggcgctggct	ggtanggggt	gattacaggg	ctgggaacag	ctcgtaact	tgccattctc	240
tgcatatact	ggntagttag	gcgagcctgg	cgctcttctt	tgcgctgagc	taaagctaca	300
tacaatggct	ttngngacct	cggccgcgac	cacgctt			337

<210> 183

<211> 374

<212> DNA

<213> Homo sapien

<400> 183

tcgagcggcc	gcccgggcag	gtccattttc	tccttgacgg	tcccacttct	ctccaatctt	60
gtagttcaca	ccattgtcat	gacaccatct	agatgaatca	catctgaaat	gaccacttcc	120
aaagcctaag	cactggcaca	acagttttaa	gcctgattca	gacattcggt	cccactcatc	180
tccaacggca	taatgggaaa	ctgtgtaggg	gtcaaagcac	gagtcacccg	taggttggtt	240
caagccttcg	ttgacagaag	ttgccacagg	taacaacctc	ttcccgaacc	ttatgcctct	300
gctggtcttt	caagtgcctc	cactatgatg	ttgtaggtgg	cacctctggt	gaggacctcg	360
gccgcgacca	cgct					374

<210> 184

<211> 375

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(375)

<223> n = A,T,C or G

<400> 184

agcgtggttt	gcggccgagg	tcctcaccan	aggtgccacc	tacaacatca	tagtggaggg	60
actgaaagac	cagcagaggc	ataaggttcg	ggaagagggt	gttaccgtgg	gcaactctgt	120
caacgaaggc	ttgaaccaac	ctacggatga	ctcgtgcttt	gacccctaca	caqnttccca	180
ttatgccgtt	ggagatgagt	gggaacgaat	gtctgaatca	ggctttaaac	tggtgtqcca	240
gtgcttangg	tttggaagtg	gtcatttcag	atgtgattca	tctanatggt	gtcatqacaa	300
tggtgngaac	tacaagattg	gagagaagtg	gnaccgtcag	ggganāaaat	ggacctgccc	360
gggcggcncg	ctcga					375

<210> 185

<211> 148

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(148)

<223> n = A,T,C or G

<400> 185

agcgtggctg	cggccgaggt	ctggcttntc	gtcangtga	ttatcctgaa	ccatccaggc	60
caaataagcg	ccggctatgc	ccctgnattg	gattgccaca	cggctcacat	tgcatgcaag	120
tttgctgagc	tgaaggaaaa	gattgate				148

<210> 186

<211> 397
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(397)
 <223> n = A,T,C or G

<400> 186
 tcgagcggcc gcccgggcag gtccaattga aacaaacagt tctgagaccg ttcttcacc 60
 actgattaag agtgggngg cgggtattag ggataatatt catttagcct tctgagcttt 120
 ctgggcagac ttggtgacct tgccagctcc agcagccttc tgggtccactg ctttgatgac 180
 acccaccgca actgtctgtc tcatatcacg aacagcaaag cgacccaaag gtggatagtc 240
 tgagaagctc tcaacacaca tgggcttgcc aggaaccata tcaacaatgg gcagcatcac 300
 cagacttcaa gaatttaagg gccatcttcc agctttttac cagaacggcg atcaatcttt 360
 tccttcagct cagcaaactt gcatgcaatg tgagccg 397

<210> 187
 <211> 584
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(584)
 <223> n = A,T,C or G

<400> 187
 tcgagcggcc gcccgggcag gtccagaggg ctgtgctgaa gtttgctgct gccactggag 60
 ccactccaat tgctggcgc ttactcctg gaaccttcac taaccagatc caggcagcct 120
 tccgggagcc acggcttctt gtgntactg accccagggc tgaccaccag cctctcacgg 180
 aggcatttta tgttaacctt cctaccattg cgtgtgtgaa cacagattct cctctgcgct 240
 atgtggacat tgccatccca tgcaacaaca agggagctca ctcagnngggg tttgatgtgg 300
 tggatgctgg ctcgggaagt tctgcgcatg gatcctgaag agattgaaaa agaagaacag 360
 gangncatgc ctgatctgga cttctacaga gatcctgaag agattgaaaa agaagaacag 420
 gctgnttgct ganaaagcaa gtgaccaagg angaaatttc angggtgaaa nggactgctc 480
 ccgctcctga attcactgct actcaacctg angntgcaga ctgggtcttga aggnghacan 540
 gggccctctg ggccatttta agcancttcg gtcgcgaaca cgnt 584

<210> 188
 <211> 579
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(579)
 <223> n = A,T,C or G

<400> 188
 agcgtgngtc gcggccgagg tgctgaatag gcacagaggg cacctgtaca ccttcagacc 60
 agtctgcaac ctccaggctga gtagcagtga actcaggagc gggagcagtc cattcaccct 120
 gaaattcctc cttggncact gccttctcag cagcagcctg ctcttctttt tcaatctctt 180
 caggatctct gtagaagtac agatcaggca tgacctccca tgggtgttca cgggaaatgg 240

tgccacgcat	gcgcagaact	tcccgagcca	gcateccacca	catcaaacc	actgagtga	300
ctcccttggt	gttgcatggg	atgggcaatg	tccacatagc	gcagaggaga	atctgtgtta	360
cacagcgcaa	tggtaggtag	gttaacataa	gatgcctccg	cgagaagctg	gtggtcagcc	420
ctgggggtcaa	gtaaccacaa	gaagccgtgg	ctcccggaag	gctgcctgga	tctggtagt	480
gaagntcca	ggagtgaagc	ggccaacaat	tggagtggct	tcagtggcaa	gcagcaaact	540
tcagcacaag	ccctctggac	ctgcccggcg	gccgctcga			579

<210> 189

<211> 374

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(374)

<223> n = A,T,C or G

<400> 189

tcgagcggcc	gccggggcag	gtccattttc	tccctgacgg	ncccacttct	ctccaatctt	60
qtagttcaca	ccattgtcat	ggcaccatct	agatgaatca	catctgaaat	gaccacttcc	120
aaagcctaag	cactggcaca	acagtttaaa	gcctgattca	gacattcggt	cccactcatc	180
tccaacggca	taatgggaaa	ctgtgtaggg	gtcaaaqcac	gagtcacccg	taggttggtt	240
caagccttcg	ttgacagagt	tgcccacggt	aacaacctcn	tccccgaacc	ttatgcctct	300
gctgggcttt	cagngcctcc	actatgatgn	tgtagggggg	cacctctggn	gangacctcg	360
gccgcgacca	cgct					374

<210> 190

<211> 373

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(373)

<223> n = A,T,C or G

<400> 190

agcgtgggtcg	cggccgaggt	cctcaccaga	ggtgccacct	acaacatcat	agtggaggca	60
ctgaaagacc	agcagaggca	taaggctcgg	gaagaggttg	ttaccgtggg	caactctgtc	120
aacgaaggct	tgaaccaacc	tacggatgac	tcgtgctttg	accctacac	agtttcccat	180
tatgccgttg	gagatgagt	ggaacgaatg	tctgaatcag	gctttaaact	gttggtgccag	240
tgcttangct	ttggaagtgg	gtcatttcag	atgtgattca	tctagatggt	gccatgacaa	300
tggngngaac	tacaagattg	gagagaagt	gnaccgncag	ggagaaaatg	gacctgcccg	360
ggcggccgct	cga					373

<210> 191

<211> 354

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(354)

<223> n = A,T,C or G

<400> 191

agcgtgggtcg	cgggccgaggt	ccacatcggc	agggtcggag	ccctggccgc	catactcgaa	60
ctggaatcca	tcggtcatgc	tctcgccgaa	ccagacatgc	ctcttgctct	tggggttctt	120
gctgatgtac	cagttcttct	gggccacact	gggctgagtg	gggtacacgc	aggtctcacc	180
agtctccatg	ttgcagaaga	ctttgatggc	atccaggntg	caaccttggt	tgggggtcaat	240
ccagtactct	ccactcttcc	agccagagtg	gcacatcttg	aggtcacggc	aggtgcggnc	300
gggggntttt	gcggctgccc	tctggntctc	ggntgtntct	natctgctgg	ctca	354

<210> 192

<211> 587

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(587)

<223> n = A,T,C or G

<400> 192

tcgagcggcc	gcccgggcag	gtctcgcggt	cgcactgggtg	atgctgggtcc	tgttggtccc	60
cccggccctc	ctggacctcc	tggccccctt	ggtcctccca	gcgctgggtt	cgacttcagc	120
ttcttgcccc	agccacctca	agagaaggct	cacgatgggtg	gccgctacta	ccgggctgat	180
gatgccaatg	tggttcgtga	ccgtgacctc	gaggtggaca	ccacctcaa	gagcctgagc	240
cagcagatcg	agaacatccg	gagcccagag	ggcagncgca	agaaccccgc	ccgcacctgc	300
cgtgacctca	agatgtgccca	ctctgactgg	aagagtggag	agtactggat	tgaccccaac	360
caagctgcaa	cctggatgcc	atcaaagtct	tctgcaacat	ggagactggg	gagacctgcg	420
tgtaccccac	tcagcccagt	gtggcccaaa	agaactggta	catcagcaag	aaccccaagg	480
acaagaagca	tgtctggttc	ggcgagaaca	tgaccgatgg	attccagttc	gagtatggcg	540
ggcagggctc	cgaccctgcc	gatggggacc	ttggccgcga	acacgct		587

<210> 193

<211> 98

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(98)

<223> n = A,T,C or G

<400> 193

agcgtggng	cgcccgaggt	ataaatatcc	agnccatctc	ctccctccac	acgctganag	60
atgaagctgt	ncaaagatct	caggggtggan	aaaaccat			98

<210> 194

<211> 240

<212> DNA

<213> Homo sapien

<400> 194

tcgagcggcc	gcccgggcag	gtccttcaga	cttggactgt	gtcacactgc	caggettcca	60
gggctccaac	ttgcagacgg	cctgttggtg	gacagtctct	gtaatcgcg	aagcaaccat	120
ggaagacctg	ggggaaaaca	ccatggtttt	atccaccttg	agatctttga	acaacttcac	180
ctctcagcgt	gcggaggagg	gctctggact	ggatatttct	acctcggccg	cgaccacgct	240

<210> 195
 <211> 400
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(400)
 <223> n = A,T,C or G

<400> 195
 cgagcgggcg accgggcagg tncagactcc aatccanana accatcaagc cagatgtcag 60
 aagctacacc atcacagggt tacaaccagg cactgactac aaganctacc tgcacacctt 120
 gaatgacaat gctcggagct cccctgtggt catcgacgcc tccactgcc a ttgatgcacc 180
 atccaaactg cgttttcctg ccaccacacc caattccttg ctggtatcat ggcagccgcc 240
 acgtgccagg attaccggta catcatcnag tatganaagc ctgggcctcc tcccagagaa 300
 gnggtccctc ggccccgcc tgntgtccca naggntacta ttactgngcc ngcaaccggc 360
 aaccgatatc nattttgnca ttggccttca acaataatta 400

<210> 196
 <211> 494
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(494)
 <223> n = A,T,C or G

<400> 196
 agcgtgggttc gcgcccgang tctgtcaga gtggcactg tagaagttcc aggaaccctg 60
 aactgtaagg gttcttcac agngccaaca ggatgacatg aaatgatgta ctcagaagtg 120
 tcttggaatg gggcccatga gatggttgtc tgagagagag cttcttgnc tgtctttttc 180
 cttccaatca ggggctcgt cttctgatta ttcttcagg caatgacata aattgtatat 240
 tcgggtcccg gntccaggcc agtaatatga ncctctgtga caccagggcg gngccgaggg 300
 accacttctc tgggaggaga cccaggcttc tcatacttga tgatgtaacc ggtaatcctg 360
 gcacgtggcg gctgccatga taccagcaag gaattggggg gtgggtggcca ggaaacgcag 420
 gttggatggn gcatcaatgg cagtggaggc cgctcgatgac cacaggggga gctccgacat 480
 tgtcattcaa ggtg 494

<210> 197
 <211> 118
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(118)
 <223> n = A,T,C or G

<400> 197
 agcgtggncg cgggcgagg gcagcgcggg ctgtgccacc ttctgctctc tgcccaacga 60
 taaggagggt ncctgcccc aggagaacat taactntccc cagctcggcc tctgccgg 118

<210> 198

<211> 403
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(403)
 <223> n = A,T,C or G

<400> 198
 tcgagcggcc gcccgggcag gttttttttg ctgaaagtgg ntactttatt ggntgggaaa 60
 gggagaagct gtggtcagcc caagagggaa tacagagncc cgaaaaaggg gagggcaggt 120
 gggctggaac cagacgcagg gccaggcaga aactttctct cctcactgct cagcctgggtg 180
 gtggctggag ctcanaaatt gggagtgaca caggacacct tcccacagcc attgcggcgg 240
 catttcattt ggccaggaca ctggctgtcc acctggcact ggtcccagaca gaagcccagag 300
 ctgggggaaag ttaattgttca cctgggggca ggaaccctcc ttatcattgn gcagagagca 360
 gaaggtggca cagcccgcgc tgcacctcgg ccgcgaccac gct 403

<210> 199
 <211> 167
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(167)
 <223> n = A,T,C or G

<400> 199
 tcgagcggcc gcccgggcag gtccaccata agtcctgata caaccacgga tgagctgtca 60
 ggagcaaggt tgatttcttt catttggtcgg gnetttctct tgggggncac ccgcactcga 120
 tatccagtga gctgaacatt ggggtggcgc cactggggcgc tcaggct 167

<210> 200
 <211> 252
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(252)
 <223> n = A,T,C or G

<400> 200
 tcgagcgggt cgccccgggca ggtccaccac acccaattcc ttgctgggtat catggcagcc 60
 gccacgtgcc aggattaccg gctacatcat caagtatgag aagcctgggt ctccctcccag 120
 agaagcgggt cctcggtccc gccctgggtg cacagaggct actattactg gcctggaacc 180
 gggaaaccgaa tatacaattt atgtcattgn cctgaagaat aatcannaan agcgancccc 240
 tgattggaag ga 252

<210> 201
 <211> 91
 <212> DNA
 <213> Homo sapien

<400> 201
 agcgtggtcg cggccgaggt tgtacaagct tttttttttt tttttttttt tttttttttt 60
 tttttttttt tttttttttt tttttttttt t 91

<210> 202
 <211> 368
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(368)
 <223> n = A,T,C or G

<400> 202
 tcgagcggnc gcccgggcag gtctgccaac accaagattg gcccccgccg catccacaca 60
 gtccgtgtgc ggggaggtaa caagaaatac cgtgccctga gggtggacgt ggggaatttc 120
 tcctggggct cagagtgttg tactcgtaaa acaaggatca tcgatgttgt ctacaatgca 180
 tctaataacg agctggttcg taccaagacc ctggtgaaga attgcatcgt gtcacatcgac 240
 agcacaccgt accgacagtg gtacgagtcc cactatgcgc tgccccctggg ccgcaagaag 300
 ggagccaagc tgactcctga ggaagaagag attttaaaca aaaaacgata taanaaaaaa 360
 aaaacaat 368

<210> 203
 <211> 340
 <212> DNA
 <213> Homo sapien

<400> 203
 agcgtggtcg cggccgaggt gaaatggtat tcagcttcct ggcacttctg gtcagcaacc 60
 cagtgttggg caacaaatga tctttgagga acatggtttt aggcggacca caccgcccac 120
 aacggccacc ccataaggc ataggccaag accatacccg ccgaatgtag gacaagaagc 180
 tctctctcag acaaccatct catggggcccc attccaggac acttctgagt acatcatttc 240
 atgtcatcct gttggcactg atgaagaacc cttacagtgc aggggttcctg gaacttctac 300
 cagtgccact ctgacaggac ctgccccggc ggccgctcga 340

<210> 204
 <211> 341
 <212> DNA
 <213> Homo sapien

<400> 204
 tcgagcggcc gcccgggcag gtccgtgcag agtggcactg gtagaagttc caggaaccct 60
 gaactgtaag gggtcttcat cagtgccaac aggatgacat gaaatgatgt actcagaagt 120
 gtccctggaat ggggcccctg agatggttgt ctgagagaga gcttcttgct ctacattcgg 180
 cgggtatggt cttggcctat gccttatggg ggtggccggt gtgggcggtg tgggtccgct 240
 aaaaccatgt tctcaaaga tcatttggtg cccaacactg gggtgctgac cagaagtgcc 300
 aggaagctga ataccatttc acctcggccg cgaccacgct a 341

<210> 205
 <211> 770
 <212> DNA
 <213> Homo sapien

<220>

<221> misc_feature
<222> (1)...(770)
<223> n = A,T,C or G

<400> 205

tcgagcggcc	gcccgggcag	gtctcccttc	ttgcggccca	ggggcagcgc	atagtgggac	60
tcgtaccact	gtcgggtacgg	tgtgctgtcg	atgagcacga	tgcaattctt	caccaggggc	120
ttgggtacgaa	ccagctcggt	attagatgca	ttgtagacaa	catcgatgat	ccttggttta	180
cgagtacaac	actctgagcc	ccaggagaaa	ttccccacgt	ccaacctcag	ggcacgggat	240
ttcttggttac	ctccccgcac	acggactgtg	tggatgcggc	gggggccaag	ctgaactcctg	300
aggaagaaga	gatttttaaac	aaaaaacgat	ctaaaaaaat	tcagaagaaa	tatgatgaaa	360
ggaaaaagaa	tgccaaaatc	agcagtctcc	tggaggagca	gttccagcag	ggcaagcttc	420
ttgcgtgcat	cgcttcaagg	ccgggacagt	gtgaccgagc	agatggctat	gtgctagagg	480
gcaagaagt	ggagttctat	cttaagaaaa	tcaggggccca	gaatgggtng	tcttcaacta	540
atccaaaggg	gagtttcaga	ccagtgcgat	cagcaaaaac	attgatactg	ntggccaaat	600
ttattgggtgc	agggcttgca	cantangan	ggctgggtct	tggggcttgg	attggnacaa	660
gctttggcag	ccttttcttt	ggttttgcca	aaaacctttt	gntgaagang	anacctnggg	720
cggacccctt	aaccgattcc	acnccnggng	gcgttctang	gncccncttg		770

<210> 206
<211> 810
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(810)
<223> n = A,T,C or G

<400> 206

agcgtgggtcg	cggccgaggt	ctgctgcttc	agcgaagggt	ttctggcata	accaatgata	60
aggctgccaa	agactgttcc	aataccagca	ccagaaccag	ccactcctac	tgttgacgca	120
cctgcaccaa	taaatttggc	agcagtatca	atgtctctgc	tgattgcact	ggtctgaaac	180
tccctttgga	ttagctgaga	cacaccattc	tgggcccctga	ttttcctaag	atagaactcc	240
aactctttgc	cctctagcac	atagccatct	gctcgggtcac	actgtcccgg	ccttgaaaggc	300
atgcacgcaa	gaagcttgcc	ctgctggaac	tgctccctcca	ggagactgct	gattttggca	360
ttctttttcc	tttcatcata	tttcttctga	attttttttag	atcgtttttt	gtttaaaatc	420
tcttcttctc	caggagtcag	cttggccccc	gccgcattcca	cacagtccgt	gtgcggggag	480
gtaacaagaa	ataccgtgcc	ctgaggttgg	acgtggggaa	tttctcctgg	ggctcagagt	540
ggtgtactcg	taaaacaagg	atcatcgatg	gtgnctacaa	tgcatctaata	aacgagctgg	600
gtcggaccca	aagaacctgg	ngaanaaatg	gatcgnctca	tcgacaggac	accgtacccg	660
acaggggnac	gantcccaact	atgcgcttgc	ccctggggccg	caanaaagga	aaactgcccg	720
ggcggccntc	gaaagcccaa	ttntggaaaa	aatccatcac	actgggnggc	cngtcgagca	780
tgcatntana	ggggcccat	ccccctnann				810

<210> 207
<211> 257
<212> DNA
<213> Homo sapien

<400> 207

tcgagcggcc	gcccgggcag	gtccccaacc	aaggctgcaa	cctggatgcc	atcaaagtct	60
tctgcaacat	ggagactggg	gagacctgcg	tgtacccac	tcagcccagt	gtggcccaga	120
agaactggta	catcagcaag	aaccccaagg	acaagaggca	tgtctggttc	ggcgagagca	180
tgaccgatgg	attccagttc	gagtatggcg	gccagggctc	cgaccctgcc	gatgtggacc	240

tcggccgcga ccacgct

257

<210> 208

<211> 257

<212> DNA

<213> Homo sapien

<400> 208

agcgtggtcg	cggccgaggt	ccacatcggc	agggtcggag	ccctggccgc	catactcgaa	60
ctggaatcca	tcggtcatgc	tctcgccgaa	ccagacatgc	ctcttgctct	tggggttctt	120
gctgatgtac	cagttcttct	gggccacact	gggctgagtg	gggtacacgc	aggtctcacc	180
agtctccatg	ttgcagaaga	ctttgatggc	atccaggttg	cagccttggt	tggggacctg	240
cccgggcggc	cgctcga					257

<210> 209

<211> 747

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(747)

<223> n = A,T,C or G

<400> 209

tcgagcggcc	gcccgggcag	gtccaccaca	cccaattcct	tgctggtatc	atggcagccg	60
ccacgtgcc	ggattaccgg	ctacatcatc	aagtatgaga	agcctgggtc	tctctccaga	120
gaagtgggcc	ctcgcccccg	ccctgggtgc	acagaggcta	ctattactgg	cctggaaccg	180
ggaaccgaat	atacaattta	tgtcattgcc	ctgaagaata	atcagaagag	cgagccccctg	240
attggaagga	aaaagacaga	cgagcttccc	caactggtaa	cccttccaca	ccccaatctt	300
catggaccag	agatcttgga	tgttccttcc	acagttcaaa	agaccccttt	cgtaaccacac	360
cctgggtatg	acactggaaa	tggatttcag	cttcctggca	cttctggtca	gcaacccagt	420
gttgggcaac	aaatgatctt	tgaggaacat	ggnttttaggc	ggaccacacc	gccacaacg	480
gccaccccc	taaggcatag	gccaagacca	taccgcgcga	atgtaggaca	agaagctntn	540
tntcanacac	catntnatgg	gccccattcc	aggacacttc	tgagtacatc	atttatgnca	600
tctgtggcac	ttgatgaaaa	cccttacagt	tcagggttct	ggaactttta	ccaggccctnt	660
tacaggactn	ggccggacnc	cttaagccna	ttncaccttg	gggcgttcta	nggtcccact	720
cgnncaactg	ngaaaatggc	tactgtn				747

<210> 210

<211> 872

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(872)

<223> n = A,T,C or G

<400> 210

agcgtggtcg	cggccgaggt	ccactagagg	tctgtgtgcc	attgcccagg	cagagtctct	60
gcgttacaaa	ctcctaggag	ggcttgctgt	gcggagggcc	tgctatggtg	tgctgcgggt	120
catcatggag	agtggggcca	aaggctgcga	ggttgtggtg	tctgnaaac	tccnaggaca	180
ngagggctaa	attccatgaa	gtttgtggat	ggcctgatga	tccacaatcg	gagacccctgt	240
taactactac	cgtctnaccn	cctgctgtnc	nccccenttt	ctgctnaana	catngggntn	300

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ntncttgnc  ntccttgggt  ngaanatnna  atngcctncc  cnttctanc  nctactngnt  360
ccananttgg  cctttaaana  atccnccttg  ccttnnncc  tgttcanntn  tttntcgta  420
aaccctatna  nttnnattan  atnntnnnnn  nctcaccccc  ctctcattn  anccnatang  480
ctnnnaantc  cttnanncct  cccncccnnt  ncnctctac  tnantncttc  tnncccata  540
cnnagctctt  tcntttaana  taatgnngcc  nngctctnca  tntctacnat  ntgnnnaatn  600
ccccncccc  cnancgnntt  tttgacctnn  naacctcctt  tcctcttccc  tncnnaaatt  660
ncnnanttcc  ncnttccnnc  ntctcggnnt  ntcccatnct  ttccannnct  tcantctanc  720
nncctncaac  ttattttcct  ntcctcctt  ntctcttaca  nccccctnn  tctactcnnc  780
nnttncatta  natttgaaac  tnccacnct  anttncctcn  ctctacnntt  ttattttncg  840
ntcnctctac  ntaatanntt  aatnanttnt  cn  872

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<210> 211

<211> 517

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(517)

<223> n = A,T,C or G

<400> 211

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tcgagcggcc  gcccgggcag  gtctgccaa  gagaccctgt  tatgctgtg  ggactggctg  60
gggcatggca  ggcggtctg  gcttcccac  cttctgttct  gagatgggg  tgggtggcag  120
tatctcatct  ttgggttcca  caatgctcac  gtggtcaggc  aggggcttct  tagggccaat  180
cttaccagtt  ggggtcccag  gcagcatgat  cttcaccttg  atgccagca  caccctgtct  240
gagcaacacg  tggcgacaaa  gcagtgtcaa  cgtagtaagt  taacagggtc  tccgctgtgg  300
atcatcaggc  catccacaaa  cttcatggat  ttagccctct  gtccctcgag  tttcccagac  360
accacaacct  cgcagccttt  ggccccactc  tccatgatga  accgcagcac  accatagcag  420
gccctccgca  caagcaagcc  ctcttaagaa  tttgtaacgc  ananactctg  ctggcaatgg  480
cacacaaacc  tctagtggac  ctcggnccgc  accacgc  517

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<210> 212

<211> 695

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(695)

<223> n = A,T,C or G

<400> 212

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tcgagcggcc  gcccgggcag  gtctgggtcca  ggatagcctg  cgagtcctcc  tactgctact  60
ccagacttga  catcatatga  atcatactgg  ggagaatagt  tctgaggacc  agtagggcat  120
gattcacaga  ttccaggggg  gccaggagaa  ccaggggacc  ctggttgctc  tgggaatacca  180
gggtcaccat  ttctcccagg  aataccagga  gggcctggat  ctcccttggg  gccttgagggt  240
ccttgaccat  taggagggcg  agtaggagca  gttggaggct  gtgggcaaac  tgcacaacat  300
tctccaaatg  gaatttctgg  gttggggcag  tctaattctt  gatccgtcac  atattatgtc  360
atcgagagaa  acggatcctg  agtcacagac  acataatttg  catgggtctg  gcttccagac  420
atctctatcc  gncataggac  tgaccaagat  gggaacatcc  tccttcaaca  agcttntgt  480
tgtgccaaaa  ataatagtgg  gatgaagcag  accgagaagt  anccagctcc  cctttttgca  540
caaagcntca  tcatgtctaa  atatcagaca  tgagacttct  ttggggcaaaa  aaggagaaaa  600
agaaaaagca  gttcaaagta  nccnccatca  agttgggtcc  ttgccccttc  agcaccgggg  660
ccccgttata  aaacacctng  ggccggaccc  ccctt  695

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<210> 213
 <211> 804
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(804)
 <223> n = A,T,C or G

<400> 213

agcgtggtcg	cggccgaggt	gttttatgac	gggcccgggtg	ctgaagggca	gggaacaact	60
tgatggtgct	actttgaact	gcttttcttt	tctccttttt	gcacaaagag	tctcatgtct	120
gatatattaga	catgatgagc	tttgtgcaaa	aggggagctg	gctacttctc	gctctgcttc	180
atcccactat	tattttggca	caacaggaag	ctggtgaagg	aggatgttcc	catcttggtc	240
agtcctatgc	ggatagagat	gtctggaagc	cagaaccatg	ccaaatatgt	gtctgtgact	300
caggatccgt	tctctgcgat	gacataatat	gtgacgatca	agaattagac	tgccccaacc	360
cagaaattcc	atttggagaa	tggtgtgcag	tttgcccaca	gcctccaact	gctcctactc	420
gccctcctaa	tggtcaagga	cctcaaggcc	ccaagggaga	tccaggccct	cctgggtattc	480
ctgggagaaa	tggtgaccct	ggtattccag	gacaaccagg	gtcccctggt	tctcctggcc	540
cccctggaat	cngngaatc	atgccctact	ggtcctcaaa	ctattctccc	anatgattca	600
tatgatgtca	agtctgggat	agcnagtang	ganggactcg	caggctattc	tggaccanac	660
ctgccggggg	ggcgttcgaa	agcccgaatc	tgcannntn	cnttcacact	ggcggccgtc	720
gagctgcttt	aaaagggcca	ttcnccttt	agnnggggg	antacaatta	ctnggcggcg	780
ttttanancg	cngnctggg	aaat				804

<210> 214
 <211> 594
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(594)
 <223> n = A,T,C or G

<400> 214

agcgtggtcg	cggccgaggt	ccacatcggc	agggtcggag	ccctggccgc	catactcgaa	60
ctggaatcca	tcggtcatgc	tctcgccgaa	ccagacatgc	ctcttgctct	tgggggttctt	120
gctgatgtac	cagttcttct	gggccacact	gggctgagtg	gggtacacgc	aggtctcacc	180
agtctccatg	ttgcagaaga	ctttgatggc	atccaggttg	cagccttggg	tgggggtcaat	240
ccagtactct	ccactcttcc	agtcagagtg	gcacatcttg	aggtcacggc	aggtgcgggc	300
gggggttcttg	cggtgcctct	ctgggctccg	gatgttctcg	atctgctggc	tcaggctctt	360
gaggggtggtg	tccacctcga	ggtcacggtc	acgaaccaca	ttggcatcat	cagcccggta	420
gtagcggcca	ccatcgtgag	ccttctcttg	angtggctgg	ggcaggaact	gaagtcgaaa	480
ccagcgtctg	gaggaccagg	gggaccaana	ggtccaggaa	gggcccgggg	gggaccaaca	540
ggaccagcat	caccaagtgc	gacccgcgag	aacctgcccg	gccgnccgct	cgaa	594

<210> 215
 <211> 590
 <212> DNA
 <213> Homo sapien

<220>

<221> misc_feature
 <222> (1)...(590)
 <223> n = A,T,C or G

<400> 215

tcgagcgnnc	gccccgggcag	gtctcgcggt	cgcaactgggtg	atgctgggtcc	tgttggtccc	60
ccccgccctc	ctggacctcc	tggccccct	ggtcctccca	gcgctgggtt	cgacttcagc	120
ttcctgcccc	agccacctca	agagaaggct	cacgatgggtg	gccgctacta	ccgggctgat	180
gatgccaatg	tggttcgtga	ccgtgacctc	gaggtggaca	ccaccctcaa	gagcctgagc	240
cagcagatcg	agaacatccg	gagcccagag	ggcagccgca	agaaccccg	ccgcacctgc	300
cgtgacctca	agatgtgcc	ctctgactgg	aagagtggag	agtactggat	tgaccccaac	360
caaggctgca	acctggatgc	catcaaagtc	ttctgcaaca	tggagactgg	tgagacctgc	420
gtgtacccca	ctcagcccag	tgtggcccag	aagaactgggt	acatcagcaa	gaaccccaag	480
gacaagaggc	atgtctgggt	cggcgagagc	atgaccgatg	gattccagtt	cgagtatggc	540
ggccagggct	cccacctgc	cgatgtggac	ctccggccgc	gaccaccctt		590

<210> 216
 <211> 801
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(801)
 <223> n = A,T,C or G

<400> 216

tngagcggcc	gccccgggcag	gntgnnaacg	ctggctcctgc	tggctcctct	ggcaaggctg	60
gtgaagatgg	tcaccctgga	aaacccggac	gacctgggtga	gagaggagtt	gttggaccac	120
aggggtgctcg	tggtttcct	ggaactcctg	gacttcctgg	cttcaaaggc	attaggggac	180
acaatgggtct	ggatggattg	aagggacagc	ccggtgctcc	tgggtgtgaag	ggtgaacctg	240
gtgccccctgg	tgaatatgga	actccaggtc	aaacaggagc	ccgtgggctt	cctgggtgaga	300
gaggaccgtg	ttggtgcccc	tggcccanac	ctcggcgcgc	accacgctaa	gcccgaattt	360
ccagcacact	gngggccgtt	actantggat	ccgagctcgg	taccaagctt	ggcgtaatca	420
tggctatagc	tgtttcctgn	gtgaaattgt	tatccgctca	caatttcaca	cancatacga	480
agccggaaaag	cataaagtgt	aaagccttgg	ggtgctaattg	agtgaactaa	ctcncattaa	540
attgcgttgc	gctcactgcc	cgcttttcca	nnngggaaac	cntggcntng	cngcttgc	600
ttaantgaaa	tccgccnacc	ccccgggaaa	agncggtttg	cngtattggg	gcnccttttc	660
cctttcctcg	gnttacttga	nttantgggc	tttggncgnt	tcgggttgng	gcgancnggt	720
tcaacntcac	nccaaaggng	gnaanacggt	tttccanana	tccgggggnt	ancccaangn	780
aaaacatnng	ncnaangggc	t				801

<210> 217
 <211> 349
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(349)
 <223> n = A,T,C or G

<400> 217

agcgtgggttn	gcggccgagg	tctggggccag	gggcaccaac	acgtcctctc	tcaccaggaa	60
gccccacgggc	tctgtttga	cctggagttc	cattttcacc	aggggcacca	ggttcaccct	120

tcacaccagg	agcaccgggc	tgtcccttca	atccatncag	accattgtgn	cccctaatagc	180
ctttgaagcc	aggaagtcca	ggagttccag	ggaaaccacc	gagcaccctg	tgggtccaaca	240
actcctctct	caccaggtag	tccgggtttt	ccagggtgac	catcttcacc	agccttgcca	300
ggaggaccag	caggaccagc	gttaccaacc	tgcccgggag	gccgctcga		349

<210> 218

<211> 372

<212> DNA

<213> Homo sapien

<400> 218

tcgagcggcc	gcccgggcag	gtccattttc	tccctgacgg	tcccacttct	ctccaatctt	60
gtagttcaca	ccattgtcat	ggcaccatct	agatgaatca	catctgaaat	gaccacttcc	120
aaagcctaag	cactggcaca	acagtttaaa	gcctgattca	gacattcggt	cccactcatc	180
tccaacggca	taatgggaaa	ctgtgtaggg	gtcaaagcac	gagtcattccg	taggttggtt	240
caagccttcg	ttgacagagt	tgcccacggt	aacaacctct	tcccgaacct	tatgcctctg	300
ctggtctttc	agtgcctcca	ctatgatgtt	gtaggtggca	cctctggtga	ggacctcggc	360
cgcgaccacg	ct					372

<210> 219

<211> 374

<212> DNA

<213> Homo sapien

<400> 219

agcgtggtcg	cggccgaggt	cctcaccaga	ggtgccacct	acaacatcat	agtggaggga	60
ctgaaagacc	agcagaggca	taaggttcgg	gaagaggttg	ttaccgtggg	caactctgtc	120
aacgaaggct	tgaaccaacc	tacggatgac	tcgtgctttg	acccttacac	agtttcccat	180
tatgccgttg	gagatgagtg	ggaacgaatg	tctgaatcag	gctttaaact	gttgtgccag	240
tgetttaggt	ttggaagtgg	tcatttcaag	atgtgattca	tctagatggt	gccatgacaa	300
tggtgtgaac	tacaagattg	gagagaagtg	ggaccgtcag	ggagaaaatg	gacctgcccg	360
ggccggccgc	tcga					374

<210> 220

<211> 828

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(828)

<223> n = A,T,C or G

<400> 220

tcgagcgnn	gcccgggcag	gtccagtagt	gccttcggga	ctgggttcac	ccccagggtc	60
gcggcagttg	tcacagcgcc	agcccgcgtg	gcctccaaag	catgtgcagg	agcaaattggc	120
accgagatat	tccttctgcc	actgttctcc	tacgtggtat	gtcttcccat	catcgttaaca	180
cgttgectca	tgagggtcac	acttgaattc	tccttttccg	ttcccaagac	atgtgcagct	240
catttggtctg	gctctatagt	ttggggaaa	ttgtgtgaaa	ctgtgccact	gacctttact	300
tcctccttct	ctactggagc	tttcgtacct	tccacttctg	ctgttggtaa	aatggtggat	360
cttctatcaa	tttcattgac	agtaccact	tctccaaac	atccaggga	atagtgattt	420
cagagcgatt	aggagaacca	aattatgggg	cagaaataag	gggcttttcc	acagggtttc	480
ctttggagga	agatttcagt	ggtgacttta	aaagaatact	caacagtgtc	ttcatcccca	540
tagcaaaaaga	agaacngta	aatgatggaa	ngcttctgga	gatgccnnca	tttaagggac	600
ncccgagaact	tcaccatcta	caggacctac	ttcagtttac	annaagncac	atantctgac	660

tcanaaaagga	cccaagtagc	nccatggnc	gcacttttag	cctttcccct	ggggaaaann	720
ttacntttctt	aaancctngg	ccnngacccc	cttaagncca	aattntggaa	aanttcctn	780
cnnetggggg	gcngttcnac	atgcntttna	agggcccaat	tncccent		828

<210> 221
 <211> 476
 <212> DNA
 <213> Homo sapien

<400> 221						
tcgagcggcc	gcccgggcag	gtgtcggagt	ccagcacggg	aggcgtgggc	ttgtagttgt	60
tctccggctg	cccattgctc	tcccactcca	cggcgatgtc	gctgggatag	aagcctttga	120
ccaggcaggt	caggctgacc	tggttcttgg	tcattctctc	ccgggatggg	ggcagggtgt	180
acacctgtgg	ttctcggggc	tgccctttgg	ccttggagat	ggttttctcg	atgggggctg	240
ggagggtctt	gttgagacc	ttgcacttgt	actccttgcc	attcagccag	tcctggtgca	300
ggacggtgag	gacgctgacc	acacggtagc	tgctgttgta	ctgctcctcc	cgcggctttg	360
tcttggcatt	atgcacctcc	acgccgtcca	cgtaccagtt	gaacttgacc	tcagggtctt	420
cgtggctcac	gtccaccacc	acgcattgaa	cctcagacct	cggccgcgac	cacgct	476

<210> 222
 <211> 477
 <212> DNA
 <213> Homo sapien

<400> 222						
agcgtggctg	cggccgaggt	ctgaggttac	atgcgtgggtg	gtggacgtga	gccacgaaga	60
ccctgaggtc	aagttcaact	ggtacgtgga	cggcggtggag	gtgcataatg	ccaagacaaa	120
gccgcgggag	gagcagtaca	acagcacgta	ccgtgtgggc	agcgtcctca	ccgtcctgca	180
ccaggactgg	ctgaatggca	aggagtacaa	gtgcaaggct	tccaacaaag	ccctcccagc	240
ccccatcgag	aaaaccatct	ccaaagccaa	agggcaagcc	ccgagaacca	caggtgtaca	300
ccctgcccc	atcccgggag	gagatgacca	agaaccaggt	cagcctgacc	tgctgtgtca	360
aaggcttcta	tcccagcgac	atcgccgtgg	agtgggagag	caatgggcag	ccgagaaca	420
actacaagac	cacgcctccc	gtgctggact	ccgacacctg	cccgggcggc	cgctcga	477

<210> 223
 <211> 361
 <212> DNA
 <213> Homo sapien

<400> 223						
tcgagcggcc	gcccgggcag	gttgaatggc	tcctcgctga	ccaccccggg	gctgggtggg	60
ggtacagagc	tccgatgggt	gaaaccattg	acatagagac	tgtccctgtc	caggggtgtag	120
gggcccagct	cagtgatgcc	gtgggtcagc	tggtcagct	tccagtacag	ccgtctctg	180
tccagtccag	ggcttttggg	gtcaggacga	tggtgtcaga	cagcatccac	tctgggtggc	240
gccccatcct	tctcaggcct	gagcaaggct	agtctgcaac	cagagtacag	agagctgaca	300
ctggtgttct	tgaacaaggg	cataagcaga	ccctgaagga	cacctcggcc	gcgaccacgc	360
t						361

<210> 224
 <211> 361
 <212> DNA
 <213> Homo sapien

<400> 224						
agcgtggctg	cggccgaggt	gtccttcagg	gtctgcttat	gcccttggtc	aagaacacca	60

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gtgtcagctc tctgtactct ggttgcagac tgaccttgcg caggcctgag aaggatgggg 120
cagccaccag agtggatgct gtctgcaccc atcgctcctga ccccaaaagc cctggactgg 180
acagagagcg gctgtactgg aagctgagcc agctgaccca cggcatcact gagctggggc 240
cctacaccct ggacagggac agtctctatg tcaatggttt caccatcgg agctctgtac 300
ccaccaccag caccggggtg gtcagcgagg agccattcaa cctgcccggg cggccgctcg 360
a 361

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<210> 225
 <211> 766
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(766)
 <223> n = A,T,C or G

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<400> 225
agcgtggctg cggccgaggt cctgtcagag tggcactggt agaagttcca ggaaccctga 60
actgtaaggg ttcttcatca gtgccaacag gatgacatga aatgatgtac tcagaagtgt 120
cctggaatgg ggcccatgag atggttgtct gagagagagc ttcttgcct acattcggcg 180
ggtatggctt tggcctatgc cttatggggg tggcgttgtt gggcgggtgt gtccgcctaa 240
aaccatgttc ctcaaagatc atttgttgcc caacactggg ttgctgacca gaagtgccag 300
gaagctgaat accatttcca gtgtcatacc cagggtgggt gacgaaaggg gtcttttgaa 360
ctgtggaagg aacatccaag atctctggtc catgaagatt ggggtgtgga agggttacca 420
gttggggaag ctggtctgtc tttttccttc caatcagggg ctgctcttc tgattattct 480
tcagggaat gacataaatt gtatattcgg tcccggttcc aggccagtaa tagtagcctc 540
tgtgacacca gggcggggcc gagggaccct tctnttgaa gagaccagct tctcatactt 600
gatgatgagn ccggtaatcc tggcacgtgg nggttgcatt atnccaccaa ggaaatnggn 660
ggggngggac ctgcccggcg gccgttcnaa agcccaattc cacacacttg gnggccgtac 720
tatggatccc actcngtcca acttggngga atatggcata actttt 766

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<210> 226
 <211> 364
 <212> DNA
 <213> Homo sapien

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<400> 226
tcgagcggcc gcccgggcag gtccttgacc ttttcagcaa gtgggaaggt gtaatccgtc 60
tccacagaca aggccaggac tcgtttgtac ccgttgatga tagaatgggg tactgatgca 120
acagttgggt agccaatctg cagacagaca ctggcaacat tgcggacacc ctccaggaag 180
cgagaatgca gagtttcctc tgtgatatca agcaattcag ggttgtagat gctgccattg 240
tcgaacacct gctggatgac cagcccaaag gagaaggggg agatgttgag catgttcagc 300
agcgtggctt cgctggctcc cactttgtct ccagtcctga tcagacctcg gccgcgacca 360
cgct 364

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<210> 227
 <211> 275
 <212> DNA
 <213> Homo sapien

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<400> 227
agcgtggctg cggccgaggt ctgtcctaca gtcctcagga ctctactccc tcagcagcgt 60
ggtgaccgtg cctccagca acttcggcac ccagacctac acctgcaacg tagatcacia 120
gccagcaac accaaggtgg acaagagagt tgagcccaaa tcttgtgaca aaactcacac 180

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atgcccaccg tgcccagcac ctgaactcct ggggggaccg tcagtcttcc tcttcccccg 240
catccccctt ccaaactgc ccgggcggcc gctcg 275

<210> 228
<211> 275
<212> DNA
<213> Homo sapien

<400> 228
cgagcggccg cccgggcagg tttggaagg ggatgcggg gaagaggaag actgacggtc 60
ccccaggag ttcagggtgct gggcacggg ggcatgtgtg agttttgtca caagatttgg 120
gctcaactct cttgtccacc ttggtgttgc tgggcttgtg atctacgttg cagggttagg. 180
tctgggtgcc gaagttgctg gagggcacgg tcaccacgct gctgaggag tagagtcctg 240
aggactgtag gacagacctc ggccgcgacc acgct 275

<210> 229
<211> 40
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(40)
<223> n = A,T,C or G

<400> 229
nggnnggtcc ggnngncag gaccactcnt cttegaaata 40

<210> 230
<211> 208
<212> DNA
<213> Homo sapien

<400> 230
agcgtggtcg cggccgaggt cctcacttgc ctcttgc aaa gcaccgatag ctgcgctctg 60
gaagcgcaga tctgttttaa agtcctgagc aatttctcgc accagacgct ggaagggaag 120
tttgcaatc agaagttcag tggacttctg ataacgtcta atttcacgga gcgccacagt 180
accaggacct gcccgggcgg ccgctcga 208

<210> 231
<211> 208
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(208)
<223> n = A,T,C or G

<400> 231
tcgagcggcc gcccgggcag gtcttggtac tngggcgctc cgtgaaatta gacgttatca 60
gaagtccact gaacttctga ttgcgaaact tcccttccag cgtctggtgc gagaaattgc 120
tcaggacttt aaaacagatc tgcgcttcca gagcgcagct atcgggtgctt tgcaggaggc 180
aagtgaggac ctcgccgcg accacgct 208

<210> 232
 <211> 332
 <212> DNA
 <213> Homo sapien

<400> 232
 tcgagcggcc gcccgggcag gtccacatcg gcagggctcg agccctggcc gccatactcg 60
 aactggaatc catcggtcat gctctcgccg aaccagacat gcctcttgct cttgggggttc 120
 ttgctgatgt accagttctt ctggggccaca ctgggctgag tgggggtacac gcaggtctca 180
 ccagtctcca tgttgacagaa gactttgatg gcatccaggt tgcagccttg gttgggggtca 240
 atccagtact ctccactctt ccagtcagag tggcacatct tgaggtcacg gcaggtgcgg 300
 gcgggggttct tgacctcggc cgcgaccacg ct 332

<210> 233
 <211> 415
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(415)
 <223> n = A,T,C or G

<400> 233
 gtgggnttga acccntttna nctccgcttg gtaccgagct cggatccact agtaacggcc 60
 gccagtgtgc tggaaattcgg cttagcgtgg tcgcggccga ggtcaagaac cccgcccgcga 120
 cctgccgtga cctcaagatg tgccactctg actggaagag tggagagtac tggattgacc 180
 ccaaccaagg ctgcaacctg gatgccatca aagtcttctg caacatggag actggtgaga 240
 cctgcgtgta cccactcag ccagtggtgg ccagaagaa ctggtacatc agcaagaacc 300
 ccaaggacaa gaggcattgtc tggttcggcg agagcatgac cgatggattc cagttcgagt 360
 atggcgccca gggctccgac cctgccgatg tggacctgcc cgggcggccg ctcca 415

<210> 234
 <211> 776
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(776)
 <223> n = A,T,C or G

<400> 234
 agcgtggctg cggccgagggt ctgggatgct cctgctgtca cagtgaagata ttacaggatc 60
 acttacggag aaacaggagg aaatagccct gtccaggagt tcaactgtgc tgggagcaag 120
 tctacagcta ccatcagcgg ccttaaacct ggagttgatt ataccatcac tgtgtatgct 180
 gtcactggcc gtggagacag ccccgcaagc agcaagccaa ttccattaa ttaccgaaca 240
 gaaattgaca aaccatccca gatgcaagtg accgatgttc aggacaacag cattagtgtc 300
 aagtggctgc cttcaagttc ccctgttact ggttacagag taaccaccac tccccaaaat 360
 ggaccaggac caacaaaaac taaaactgca ggtccagatc aaacagaaat gactattgaa 420
 ggcttgacgc ccacagtggg gtatgtggtt aagtgtctat gctcagaatc caagcggaga 480
 gaagtcagcc tctggttcag actgnaagta accaacattg atcgccataa ggactggcat 540
 tcaactgatgn ggatgccgat tccatcaaaa ttgnttggga aaaccacag gggcaagttt 600
 ncangtcnag gnggacctac tcgagccctg aggatggaat ccttgactnt tccttnncc 660
 gatggggaaa aaaaaccttn aaaacttgaa ggacctgccc gggcgccgt ncaaaaccca 720

attccacccc cttgggggcg ttctatgggn ccactcggga ccaaacttgg ggtaan

776

<210> 235

<211> 805

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(805)

<223> n = A,T,C or G

<400> 235

tcgagcggcc	gcccgggag	gtccttgag	ctctgcagt	tcttcttcac	catcaggtgc	60
agggaaatagc	tcatggattc	catcctcagg	gctcgagtag	gtcacccctgt	acctggaaac	120
ttgcccctgt	gggctttccc	aagcaat	gatggaatcg	gcattccacat	cagtgaatgc	180
cagtccttta	gggcatcaa	tgttggttac	tgcagtctga	accagaggct	gactctctcc	240
gcttgattc	tgagcataga	cactaaccac	atactccact	gtgggctgca	agccttcaat	300
agtcatttct	gtttgatctg	gacctgcagt	tttagttttt	gttggtcctg	gtccattttt	360
gggagtggg	gttactctgt	aaccagtaac	aggggaactt	gaaggcagcc	acttgacact	420
aatgctgttg	tcctgaacat	cggtcacttg	catctgggat	ggtttgtcaa	tttctgttcg	480
gtaattaatg	gaaattggct	tgtgcttgc	ggggcttgc	tccacggcca	gtgacagcat	540
acacagtgat	ggtataatca	actccagggt	taagccgctg	atggtagctg	aaactttgct	600
ccaggcacia	gtgaactcct	gacagggcta	tttcctnctg	ttctccgtaa	gtgatcctgt	660
aatatctcac	tgggacagca	ggangcattc	caaaacttcg	ggcgngaccc	cctaagccga	720
attntgcaat	atncatcaca	ctggcgggag	ctcgancatt	cattaaaagg	cccaatcncc	780
cctataggga	gtntantaca	attng				805

<210> 236

<211> 262

<212> DNA

<213> Homo sapien

<400> 236

tcgagcggcc	gcccgggag	gtcacttttg	gtttttgggc	atgttcgggt	ggtcaaagat	60
aaaaactaag	tttgagagat	gaatgcaaag	gaaaaaaata	ttttccaaag	tccatgtgaa	120
attgtctccc	atttttttgg	cttttgaggg	ggttcagttt	gggttgcttg	tctgtttccg	180
ggttgggggg	aaagtgtggt	gggtgggagg	gagccaggtt	gggatggagg	gagtttacag	240
gaagcagaca	gggccaacgt	cg				262

<210> 237

<211> 372

<212> DNA

<213> Homo sapien

<400> 237

agcgtgggtcg	cggccgaggt	cctcaccaga	ggtgccacct	acaacatcat	agtggaggca	60
ctgaaagacc	agcagaggca	taagggttcg	gaagaggttg	ttaccgtggg	caactctgtc	120
aacgaaggct	tgaaccaacc	tacggatgac	tcgtgctttg	accctacac	agtttccat	180
tatgccgttg	gagatgagt	ggaacgaatg	tctgaatcag	gctttaaact	gttggtccag	240
tgcttaggct	ttggaagtgg	tcatttcaga	tgtgattcat	ctagatgggt	ccatgacaat	300
ggtgtgaact	acaagattgg	agagaagtgg	gaccgtcagg	gagaaaatgg	acctgccggg	360
gcggccgctc	ga					372

<210> 238

<211> 372
 <212> DNA
 <213> Homo sapien

<400> 238
 tcgagcggcc gcccgggcag gtccattttc tccctgaagg tcccacttct ctccaatctt 60
 gtagttcaca ccattgtcat ggcaccatct agatgaatca catctgaaat gaccacttcc 120
 aaagcctaag cactggcaca acagttttaa gcctgattca gacattcgtt cccactcatc 180
 tccaacggca taatgggaaa ctgtgtaggg gtcaaagcac gagtcacccg taggttggtt 240
 caagccttcg ttgacagagt tgcccacggt aacaacctct tcccgaacct tatgcctctg 300
 ctggtctttc agtgccctca ctatgatgtt gtaggtggca cctctggtga ggacctcggc 360
 cgcgaccacg ct 372

<210> 239
 <211> 720
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(720)
 <223> n = A,T,C or G

<400> 239
 tcgagcggcc gcccgggcag gtccaccata agtcttgata caaccacgga tgagctgtca 60
 ggagcaaggc tgatttcttt cattgggtccg gtcttctcct tgggggtcac cgcactcga 120
 tatccagtga gctgaacatt ggggtggtgc cactgggcgc tcaggcttgt ggggtgtgacc 180
 tgagtgaact tcaggtcagt tgggtgcagg atagtgggta ctgcagctg aaccagaggc 240
 tgactctctc cgcttggtatt ctgagcatag aactaacca catactccac tgtgggctgc 300
 aagccttcaa tagtcatttc tgtttgatct ggacctgcag ttttagtttt tgttggtcct 360
 ggtccatttt tgggagtggg ggttactctg taaccagtaa cagggggaact tgaaggcagc 420
 cacttgacac taatgctgtt gtcctgaaca tcggtcactt gcactctgga tggtttgnca 480
 atttctgttc ggtaattaat ggaaattggc ttgctgcttg cggggctgtc tccacggcca 540
 gtgacagcat acacagngat ggnatnatca actccaagtt taaggccctg atggtaactt 600
 taaacttgct cccagccagn gaacttccgg acagggtatt tcttctggtt ttccgaaagn 660
 gancctggaa tnntctcctt ggancagaa gancntccaa aacttggggc ggaacccctt 720

<210> 240
 <211> 691
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(691)
 <223> n = A,T,C or G

<400> 240
 agcgtggctc cggccgaggt cctgtcagag tggcactggc agaagttcca ggaaccctga 60
 actgtaaggg ttcttcatca gtgccaacag gatgacatga aatgatgtac tcagaagtgt 120
 cctggaatgg ggcccatgag atggttgtct gagagagagc ttcttgtcct acattcggcg 180
 ggtatggctc tggcctatgc cttatggggg tggccgttgt gggcggtgtg gtccgcctaa 240
 aacctgttct ctcaaagatc atttgttgcc caacactggg ttgctgacca gaagtgcacg 300
 gaagctgaat accatttcca gtgtcatacc cagggtgggt gacgaaaggg gtcttttgaa 360
 ctgtggaagg aacatccaag atctctggtc catgaagatt ggggtgtgga agggttacca 420


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gttggggaag ctggtctgtc tttttccttc caatcagggg ctggtctctc tgattattct 480
tcagggaat gacataaatt gtatattcgg ttcccgggtc caggccagta atagtagcct 540
cttgtgacac caggcggggc ccanggacca cttctctggg angagacca gcttctcata 600
cttgatgatg taacccggta atcctgcacg tggcggtgn catgatacca ncaaggaatt 660
gggtgngngg gacctgcccc ggcgcctcn a 691

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<210> 241

<211> 808

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(808)

<223> n = A,T,C or G

<400> 241

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agcgtggtcg cggccgaggt ctgggatgct cctgctgtca cagtgagata ttacaggatc 60
acttacggag aaacaggagg aaatagccct gtccaggagt tcaactgtgcc tgggagcaag 120
tctacagcta ccatacagcg ccttaaacct ggagttgatt ataccatcac tgtgtatgct 180
gtcactggcc gtggagacag ccccgcaagc agcaagccaa tttccattaa ttaccgaaca 240
gaaattgaca aaccatccca gatgcaagtg accgatgttc aggacaacag cattagtgtc 300
aagtggctgc cttcaagttc cctgttact ggttacagag taaccaccac tcccaaaaat 360
ggaccaggac caacaaaaac taaaactgca ggtccagatc aaacagaaat gactattgaa 420
ggcttgacgc ccacagtgga gtatgtggtt agtgtctatg ctcagaatcc aagcggagag 480
agtcagcctc tgggttcagac tgcagtaacc actattcctg caccaactga cctgaagtgc 540
actcaggtca caccacaag cctgagccgc cagtggacac caccatgt tcaactactg 600
gatatcgagt gcgggtgacc cccaaggaga agacccggac ccatgaaaga aatcaacctt 660
gtccttgaca gctcatccgn ggggtgatca ggacttatgg gggactgcc cggcnggccg 720
ntcgaaancg aattntgaaa tttccttcnc actgggnggc gnttcgagct tncctntana 780
nggcccaatt cncctntagn gggtegtc 808

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<210> 242

<211> 26

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(26)

<223> n = A,T,C or G

<400> 242

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agcgtggtcg cggccgaggt cnagga 26

```

<210> 243

<211> 697

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(697)

<223> n = A,T,C or G

<400> 243

tcgagcggcc	gcccgggcag	gtccaccaca	cccaattcct	tgctggtatc	atggcagccg	60
ccacgtgcc	ggattaccgg	ctacatcatc	aagtatgaga	agcctgggtc	tctcccaga	120
gaagtgggtc	ctcgcccccg	ccttggtgtc	acagaggcta	ctattactgg	cctggaaccg	180
ggaaccgaat	atacaattta	tgtcattgcc	ctgaagaata	atcagaagag	cgagcccctg	240
attggaagga	aaaagacaga	cgagcttccc	caactggtaa	cccttcacac	ccccaatctt	300
catggaccag	agatcttggg	tgttccttcc	acagttcaaa	agaccccttt	cgtaaccac	360
cctgggtatg	acactggaaa	tggatttcag	cttcctggca	cttctggtca	gcaaccacgt	420
gttgggcaac	aaatgatctt	tgaggaacat	ggtttttagg	ggaccacacc	gccacaacg	480
ggcaccacca	taaggatag	gccaagacca	taccccgccg	aatgtaggac	aagaagctct	540
ntctcaaca	ccatctcatg	ggccccattc	caggacactt	ctgagtacat	catttcatgt	600
catcctggtg	ggcacttgat	gaanaacct	tacagttcag	ggttcctgga	acttctacca	660
gngccacttc	tgacagganc	ttgggcgnga	ccaccct			697

<210> 244

<211> 373

<212> DNA

<213> Homo sapien

<400> 244

agcgtgggtc	cgcccgaggt	ccattttctc	cctgacggtc	ccacttctct	ccaatcttgt	60
agttcacacc	attgtcatgg	caccatctag	atgaatcaca	tctgaaatga	ccacttccaa	120
agcctaagca	ctggcacaa	agtttaaagc	ctgattcaga	cattcggttc	cactcatctc	180
caacggcata	atgggaaact	gtgtaggggt	caaagcacga	gtcatccgta	ggttggttca	240
agccttcgtt	gacagagttg	cccacggtaa	caacctcttc	ccgaacctta	tgctctgct	300
ggtctttcag	tgctccact	atgatgttgt	aggtggcacc	tctggtgagg	acctgcccgg	360
gcggcccgtc	cga					373

<210> 245

<211> 307

<212> DNA

<213> Homo sapien

<400> 245

agcgtgggtc	cgcccgaggt	gtgccccaga	ccaggaattc	ggcttcgacg	ttggccctgt	60
ctgcttctct	taaactccct	ccatcccaac	ctggctccct	cccacccaac	caactttccc	120
cccaaccggg	aaacagacaa	gcaacccaaa	ctgaaccccc	tcaaaaagcca	aaaaaatggg	180
agacaatttc	acatggactt	tggaataat	ttttttcctt	tgcatcctac	tctcaactt	240
agtttttatc	tttgaccaac	cgaacatgac	caaaaaccaa	aagtgacctg	cccggggcggc	300
cgctcga						307

<210> 246

<211> 372

<212> DNA

<213> Homo sapien

<400> 246

tcgagcggcc	gcccgggcag	gtcctcacca	gaggtgccac	ctacaacatc	atagtggagg	60
cactgaaaga	ccagcagagg	cataagggtc	gggaagaggt	tgttaccgtg	ggcaactctg	120
tcaacgaagg	cttgaaccaa	cctacggatg	actcgtgctt	tgacccctac	acagtttccc	180
attatgccgt	tggagatgag	tgggaacgaa	tgtctgaatc	aggctttaaa	ctggtgtgcc	240
agtgccttag	ctttggaagt	ggtcatttca	gatgtgattc	atctagatgg	tgccatgaca	300
atggtgtgaa	ctacaagatt	ggagagaagt	gggaccgtca	gggagaaaat	ggacctcggc	360
cgcgaccacg	ct					372

<210> 247
 <211> 348
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(348)
 <223> n = A,T,C or G

<400> 247
 tcgagcggcc gcccgggcag gtaccgggggt ggtcagcgag gagccattca cactgaactt 60
 caccatcaac aacctgcggt atgaggagaa catgcagcac cctggctcca ggaagttcaa 120
 caccacggag agggtccttc agggcctgct caggtccttg ttcaagagca ccagtgttg 180
 ccctctgtac tctggctgca gactgacttt gctcagacct gagaaacatg gggcagccac 240
 tggagtggac gccatctgca ccctccgcct tgatcccact ggtncctggac tggacanana 300
 gcggctatac ttgggagctg anccnaacct ttggcgngga cncnctt 348

<210> 248
 <211> 304
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(304)
 <223> n = A,T,C or G

<400> 248
 gaggactggc tcagctccca gtatagccgc tctctgtcca gtccaggacc agtgggatca 60
 aggcggaggg tgcagatggc gtccactcca gtggctgccc catgtttctc aagtctgagc 120
 aaagncagtc tgcagccaga gtacagaggg ccaacactgg tgctcttgaa caggacactg 180
 agcaggccct gaaggaccct ctccgtggtg ttgaacttcc tggagccagg gtgctgcatg 240
 ttctcctcat accgcagggt gttgatggtg aagttcagtg tgaatggctc ctgctgacc 300
 accc 304

<210> 249
 <211> 400
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(400)
 <223> n = A,T,C or G

<400> 249
 agcgtggtcg cggccgaggt ccaccacacc caattccttg ctggtatcat ggcagccgcc 60
 acgtgccagg attaccggt acatcatcaa gtatgagaag cctgggtctc ctcccagaga 120
 agtggtcctt cgccccgcc ctggtgtcac agaggctact attactggcc tggaaaccggg 180
 aaccgaatat acaatttatg tcattgccct gaagaataat cagaagagcg agccctgat 240
 tgggaaggaaa aagacagacg agcttcccca actggttaacc ctccacacc ccaatcttca 300
 tggaccanan ancttgatn gtcctttcac nggttnaaaa aacccttttc gccccccac 360
 cttggggatt aaccttggga aanggggatt tnacncttcc 400

<210> 250
<211> 400
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(400)
<223> n = A,T,C or G

<400> 250
tcgagcggcc gcccgggcag gtcctgtcag agtggcactg gtagaagttc caggaaccct 60
gaactgtaag gggtcttcat cagtgccaac aggatgacat gaaatgatgt actcagaagt 120
gtcctggaat ggggcccatg agatggttgt ctgagagaga gcttcttgct ctacattcgg 180
cggtatggt cttggcctat gccttatggg ggtggccgtt gtgggcggtg tgggccgcct 240
aaaaccatgt tcctcaaaga tcatttggtg cccaacactg ggttgctgac cagaagtgcc 300
aggaagctga ataccatttc cagtgtcata ccagggngg gtgaccaaag ggggtcnttt 360
ngacctggng aaaggaacca tccaaaanct ctgncccatg 400

<210> 251
<211> 514
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(514)
<223> n = A,T,C or G

<400> 251
agcgtggncg cggccgaggt ctgaggatgt aaactcttcc caggggaagg ctgaagtgtc 60
gaccatggtg ctactgggtc cttctgagtc agatatgtga ctgatgngaa ctgaagtagg 120
tactgtagat ggtgaagtct ggggtgtccct aaatgctgca tctccagagc cttccatcat 180
taccgtttct tcttttgcta tgggatgaga cactgttgag tattctctaa agtcaccact 240
gaaatcttcc tccaaaggaa aacctgtgga aaagcccctt atttctgccc cataatttgg 300
ttctccta at cncctctgaaa tcactatttc cctggaangt ttgggaaaaa nngggcnacc 360
tgncantgga aantggatan aaagatccca ccattttacc caacnagcag aaagtgggaa 420
nggtaccgaa agctccaag taanaaaaag gagggaagta aaggtcaagt gggcaccagt 480
ttcaaacaaa actttcccca aactatanaa ccca 514

<210> 252
<211> 501
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(501)
<223> n = A,T,C or G

<400> 252
aagcggccgc ccggcgaggn ncagnagtgc cttcgggact gggntcaccc ccaggtctgc 60
ggcagttgtc acagcgccag ccccgctggc ctccaaagca tgtgcaggag caaatggcac 120
cgagatattc cttctgccac tgttctccta cgtggtatgt cttcccatca tcgtaacacg 180
ttgcctcatg agggtcacac ttgaattctc cttttccgtt cccaagacat gtgcagctca 240

tttggctggc tctatagttt ggggaaagt	tgttgaaact gtgccactga cctttacttc	300
ctccttctct actggagctt tccgtacctt	ccacttctgc tgntggnaaa aagggnggaa	360
cntcttatca atttcattgg acagtanccc	nctttctncc caaaacatnc aagggaaaat	420
attgattncn agagcggatt aaggaacaac	ccnaattatg ggggccagaa ataaaggggg	480
cttttccaca ggtnttttcc t		501

<210> 253

<211> 226

<212> DNA

<213> Homo sapien

<400> 253

tcgagcggcc gcccgggcag gtctgcaggc	tattgtaagt gttctgagca catatgagat	60
aacctgggccc aagctatgat gttcgatacg	ttaggtgtat taaatgcact tttgactgcc	120
atctcagtgg atgacagcct tctcactgac	agcagagatc ttctcactg tgccagtggg	180
caggagaaaag agcatgctgc gactggacct	cggccgcgac cacgct	226

<210> 254

<211> 226

<212> DNA

<213> Homo sapien

<400> 254

agcgtggctg cggccgaggt ccagtcgcag	catgctcttt ctctgccc ctggcacagt	60
gaggaagatc tctgctgtca gtgagaaggc	tgtcatccac tgagatggca gtcaaaagt	120
catttaatac acctaacgta tcgaacatca	tagcttggcc caggttatct catatgtgct	180
cagaacactt acaatagcct gcagacctgc	ccgggcggcc gctcga	226

<210> 255

<211> 427

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(427)

<223> n = A,T,C or G

<400> 255

cgagcggccg cccgggcagg tccagactcc	aatccagaga accaccaagc cagatgtcag	60
aagctacacc atcacagggt tacaaccagg	cactgactac aagatctacc tgtacacctt	120
gaatgacaat gtcggagct cccctgtggt	catcgacgcc tccactgcca ttgatgcacc	180
atccaacctg cgtttcttg ccaccacacc	caattccttg ctggtatcat ggcagccgcc	240
acgtgccagg attaccggct acatcatcaa	gtatgagaag cctgggtctc ctcccagaga	300
agtgtccct cggccccgcc ctggtgnac	agaagctact attactggcc tggaaccggg	360
aaccgaatat acaatttatg tcattgccct	gaagaataat canaagagcg agcccctgat	420
tggaagg		427

<210> 256

<211> 535

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(535)

<223> n = A,T,C or G

<400> 256

agcgtgggtcg	cggccgaggt	cctgtcagag	tggcactggg	agaagttcca	ggaaccctga	60
actgtaaggg	ttcttcatca	gtgccaacag	gatgacatga	aatgatgtac	tcagaagtgt	120
cctggaatgg	ggcccatgag	atggttgtct	gagagagagc	ttcttgtcct	gtctttttcc	180
ttccaatcag	gggctcgctc	ttctgattat	tcttcagggc	aatgacataa	attgtatatt	240
cgggtccccg	ttccaggcca	gtaatagtag	cctctgtgac	accaggggcg	ggccgaggga	300
ccacttctct	gggaggagac	ccaggcttct	catacttgat	gatgtanccg	gtaatcctgg	360
caccgtggcg	gctgccatga	taccagcaag	gaattgggtg	tgggtggcaa	gaaacgcagg	420
ttggatgggtg	catcaatggc	agtggaggcg	tcgatnacca	caggggagct	ccgancattg	480
tcattcaagg	tggacaggta	gaatcttgta	atcagggtgcc	tggtttgtaa	acctg	535

<210> 257

<211> 544

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(544)

<223> n = A,T,C or G

<400> 257

tcgagcggcc	gcccgggcag	gtttcgtgac	cgtgacctcg	aggtggacac	caccctcaag	60
agcctgagcc	agcagatcga	gaacatccgg	agcccagagg	gcagccgcaa	gaaccccgcc	120
cgcacctgcc	gtgacctcaa	gatgtgccac	tctgactgga	agagtggaga	gtactggatt	180
gacccaacc	aaggctgcaa	cctggatgcc	atcaaagtct	tctgcaacat	ggagactggg	240
gagacctgcg	tgtacccac	tcagcccagt	gtggcccaga	agaactggta	catcagcaag	300
aacccaagg	acaagaagca	tgtctgggtc	ggcgaaagca	tgaccgatgg	attccagttc	360
gagtatggcg	gccagggtc	cgacctgcc	gatgtggacc	tcggccgcga	ccacgctaag	420
cccgaattcc	agcacactgg	cggccgttac	tagtgggatc	cgagcttcgg	taccaagctt	480
ggcgtaatca	tgggncatag	ctgtttcctg	ngtgaaaatg	gtattccgct	tcacaatttc	540
ccac						544

<210> 258

<211> 418

<212> DNA

<213> Homo sapien

<400> 258

agcgtgggtcg	cggccgaggt	ccacatcggc	agggtcggag	ccctggccgc	catactcgaa	60
ctggaatcca	tcgggtcatgc	tctcgccgaa	ccagacatgc	ctcttgtcct	tggggttctt	120
gctgatgtac	cagttcttct	gggccacact	gggctgagtg	gggtacacgc	aggtctcacc	180
agtctccatg	ttgcagaaga	ctttgatggc	atccaggttg	cagccttggt	tgggggtcaat	240
ccagtactct	ccactcttcc	agtcagagtg	gcacatcttg	aggtcacggc	aggtgcgggc	300
ggggttcttg	cggtgcctct	ctgggtcccg	gatgttctcg	atctgctggc	tcaagctctt	360
gaagggtggg	gtccacctcg	aggtcacggg	cacgaaacct	gcccgggcgg	ccgctcga	418

<210> 259

<211> 377

<212> DNA

<213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(377)
 <223> n = A,T,C or G

<400> 259
 agcgtggtcg cggccgaggt caagaacccc gccgcacact gccgtgacct caagatgtgc 60
 cactctgact ggaagagtgg agagtactgg attgacccca accaaggctg caacctggat 120
 gccatcaaag tcttctgcaa catggagact ggtgagacct gcgtgtacct cactcagccc 180
 agtgtggccc agaagaactg gtacatcagc aagaacccca aggacaagag gcatgtcttg 240
 ttcggcgaga gcatgaccga tggattccag ttcgagtatg gcggccaggg ctccgaccct 300
 gccgatgtgg acctgcccgn gccggnccgc tcgaaaagcc cnaatttcca gncacacttg 360
 gccggccggt actactg 377

<210> 260
 <211> 332
 <212> DNA
 <213> Homo sapien

<400> 260
 tcgagcggcc gcccgggcag gtccacatcg gcagggtcgg agccctggcc gccatactcg 60
 aactggaatc catcggtcat gctctcgccg aaccagacat gcctcttgct cttgggggttc 120
 ttgctgatgt accagttctt ctgggccaca ctgggctgag tggggtacac gcaggctctca 180
 ccagtctcca tgttgacaga gactttgatg gcatccaggt tgcagccttg gttgggggtca 240
 atccagtact ctccactctt ccagtcagag tggcacatct tgaggtcacg gcagggtgcgg 300
 gcgggggttct tgacctcggc cgcgaccacg ct 332

<210> 261
 <211> 94
 <212> DNA
 <213> Homo sapien

<400> 261
 cgagcggccg cccgggcagg tccccccct tttttttttt tttttttttt tttttttttt 60
 tttttttttt tttttttttt tttttttttt tttt 94

<210> 262
 <211> 650
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(650)
 <223> n = A,T,C or G

<400> 262
 agcgtggtcg cggccgaggt ctggcattcc ttcgacttct ctccagccga gtttcccaga 60
 acatcacata tcaactgaaa aatagcattg catcacatgga tcaggccagt ggaaatgtaa 120
 agaaggccct gaagctgatg ggggtcaaatg aagggtgaatt caaggctgaa ggaaatagca 180
 aattcaccta cacagttctg gaggatggtt gcacgaaaca cactggggaa tggagcaaaa 240
 cagtctttga atatcgaaca cgcaaggctg tgagactacc tattgtagat attgcaccct 300
 atgacattgg tggctctgat caagaatttg gtgtggacgt tggccctggt tgctttttat 360
 aaaccaaact ctatctgaaa tcccaacaaa aaaaatttaa ctccatattg gntcctcttg 420
 ttctaattctt ggcaaccagt gcaagtgacc gacaaaattc cagttattta tttccaaaat 480

```

gtttggaac agtataattt gacaaagaaa aaaggatact tctctttttt tggttggtcc 540
accaaataca attcaaaagg ctttttggtt ttattttttt anccaattcc aatttcaaaa 600
tgtctcaatg gngcttataa taaaataaac tttcaccctt nttttntgat 650

```

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<210> 263
<211> 573
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature
<222> (1)...(573)
<223> n = A,T,C or G

```

```

<400> 263
agcgtggtcg cggccgaggt ctgggatgct cctgctgtca cagtgaagata ttacaggatc 60
acttacggag aaacaggagg aaatagccct gtccaggagt tcactgtgcc tgggagcaag 120
tctacagcta ccatcagcgg ccttaaacct ggagttgatt ataccatcac tgtgtatgct 180
gtcactggcc gtggagacag ccccgaagc agcaagccaa tttccattaa ttaccgaaca 240
gaaattgaca aaccatccca gatgcaagtg accgatgttc aggacaacag cattagtgtc 300
aagtggctgc cttcaagttc ccctgttact ggttacagaa gtaaccacca ctcccaaaaa 360
tggaccagga ccaacaaaaa ctaaaactgc aggtccagat caaacagaaa atggactatt 420
gaaggcttgc agcccacagt ggaagtatgt ggntaggngt ctatgctcag aatcccaagc 480
cggagaaagt cagccttctg gtttagactg cagtaaccaa cattgatcgc cctaaaggac 540
tggncattca cttggatggt ggatgtccaa ttc 573

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```

<210> 264
<211> 550
<212> DNA
<213> Homo sapien

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<220>
<221> misc_feature
<222> (1)...(550)
<223> n = A,T,C or G

```

```

<400> 264
tcgagcggcc gcccgggcag gtccttgca gctctgcagng tcttcttcac catcaggtgc 60
agggaaatagc tcatggattc catcctcagg gctcgagtag gtcaccctgt acctggaaac 120
ttgcccctgt gggctttccc aagcaatttt gatggaatcg acatccacat cagnaatgc 180
cagtccttta gggcgatcaa tggttggttac tgcagtctga accagaggct gactctctcc 240
gcttggaattc tgagcataga cactaaccac atactccact gtgggctgca agccttcaat 300
agtcatttct gtttgatctg gacctgcagt tttaagtttt tgggtggctc gnccatttt 360
tgggaagtgg ggggttactc tgtaaccagt aacaggggaa cttgaaggca gccacttgac 420
actaatgctg ttgtcctgaa catcggtcac ttgcatctgg ggatggtttt gacaatttct 480
ggttcggcaa attaattgaa attggcttgc tgcttggcgg ggctgnctcc acgggccagt 540
gacagcatatc 550

```

```

<210> 265
<211> 596
<212> DNA
<213> Homo sapien

```

```

<220>
<221> misc_feature

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<222> (1)...(596)

<223> n = A,T,C or G

<400> 265

tcgagcggcc	gcccgggcag	gtccttgacg	ctctgcagtg	tcttcttcac	catcaggtgc	60
agggaaatgc	tcatggattc	catcctcagg	gctcgagtag	gtcaccctgt	acctggaaac	120
ttgcccctgt	gggctttccc	aagcaatttt	gatggaatcg	acatccacat	cagtgaatgc	180
cagtccttta	gggcgatcaa	tggtggttac	tgcagtcctga	accagaggct	gactctctcc	240
gcttggattc	tgagcataga	cactaaccac	atactccact	gtgggctgca	agccttcaat	300
agtcatttct	gtttgatctg	gacctgcagt	tttaagtttt	tggtggncct	gnnccatttt	360
tggggaaggg	gtggttactc	ttgtaaccag	taacagggga	actgaagca	gccacttgac	420
actaatgctg	gtggcctgaa	catcggtcac	ttgcatctgg	gatggtttgg	tcaatttctg	480
ttcgtaatt	aatgggaaat	tggttactg	gcttgcgggg	gctgtctcca	cggncagtga	540
caagcataca	caggngatgg	gtataatcaa	ctccaggttt	aaggccnctg	atggta	596

<210> 266

<211> 506

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(506)

<223> n = A,T,C or G

<400> 266

agcgtgggtcg	cggccgaggt	ctgggatgct	cctgctgtca	cagtgagata	ttacaggatc	60
acttacggag	aaacaggagg	aaatagccct	gtccaggagt	tactgtgcc	tgaggagcaag	120
tctacagcta	ccatcagcgg	ccttaaacct	ggagttgatt	ataccatcac	tgtgtatgct	180
gtcactggcc	gtggagacag	ccccgcaagc	agtaagccaa	ttccattaa	ttaccgaaca	240
gaaattgaca	aaccatccca	gatgcaagtg	accgatgttc	aggacaacag	cattagtgtc	300
aagtggctgc	cttcaagttc	ccctgttact	ggttacagag	taaccaccac	tcccaaaaat	360
gggaccagga	ccaacaaaaa	actaaaactg	canggtccag	atcaaacaga	aatgactatt	420
gaaggcttgc	agccacagc	ggagtatgtg	ggttagtgct	tatgtctcaga	atnccaagcg	480
gagagagtca	gcctctgggt	cagact				506

<210> 267

<211> 548

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(548)

<223> n = A,T,C or G

<400> 267

tcgagcggcc	gcccgggcag	gtcagcgctc	tcaggacgtc	accaccatgg	cctgggctct	60
gtcctctctc	acctctctca	ctcagggcac	agggctcctg	gcccagtcctg	ccctgactca	120
gcctccctcc	gcgtccgggt	ctcctggaca	gtcagtcacc	atctcctgca	ctggaaccag	180
cagtgacgtt	ggtgcttatg	aatttgtctc	ctggtaccaa	caacacccag	gcaaggcccc	240
caaactcatg	atttctgagg	tcactaagcg	gccctcaggg	gtccctgata	gcttctctgg	300
ctccaagtct	ggcaacacgg	cctccctgac	cgtctctggg	ctccangctg	aggatgangc	360
tgattattac	tggaagctca	tatgcaggca	acaacaattg	ggtgttcggc	ggaaggggacc	420
aagctgaccg	tnctaaggctc	aagcccaagg	cttgcccccc	tcggctcactc	tgttcccacc	480

ctcctctgaa gaagctttca agccaacaan gncacactgg gtgtgtctca taagtggact 540
 ttctaccc 548

<210> 268
 <211> 584
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(584)
 <223> n = A,T,C or G

<400> 268
 agcgtggtcg cggccgaggt ctgtagcttc tgtgggactt ccaactgctca ggcgtcaggc 60
 tcaggtagct gctggccgcg tacttggtgt tgctttgntt ggaggggtgtg gtggtctcca 120
 ctcccgctt gacggggctg ctatctgcct tccaggccac tgtcacggct cccgggtaga 180
 agtcacttat gagacacacc agtgtggcct tgttggcttg aagctcctca gaggaggggtg 240
 ggaacagagt gaccgagggg gcagccttgg gctgacctag gacggtcagc ttggtccctc 300
 cgccgaacac ccaattgttg ttgcttgcct atgagctgca gtaataatca gcctcatcct 360
 cagcctggag cccagagacn gtcaagggag gcccgtgttt gccaaagactt ggaagccaga 420
 naagcgatca gggacccctg agggccgctt tacngacctc aaaaaatcat gaatttgagg 480
 ggcctttgcc tggnggttg ttggtnacca gnaaaacaaa atttcataaa gcaccaacgt 540
 cactgctggt ttccagtgcg ngaanatggt gaactgaant gtcc 584

<210> 269
 <211> 368
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(368)
 <223> n = A,T,C or G

<400> 269
 agcgtggtcg cggccgaggt ccagcatcag gagccccgcc ttgccggctc tgggtcatcgc 60
 ctttcttttt gtggcctgaa acgatgtcat caattcgag tagcagaact gccgtctcca 120
 ctgctgtctt ataagtctgc agcttcacag ccaatggctc ccatatgccc agttccttca 180
 tgtccaccaa agtaccgctc tcaccattta caccacaggt ctcacagttc tcctgggtgt 240
 gcttggcccg aaggaggta agtanacgga tgggtgctgt cccacagttc tggatcaggg 300
 tacgaggaat gacctctagg gcctgggchna caagccctgt atggacctgc ccgggcgggc 360
 ccgctcga 368

<210> 270
 <211> 368
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(368)
 <223> n = A,T,C or G

<400> 270

tcgagcggcc	gcccgggcag	gtccatacag	ggctgttgcc	caggccctag	aggn cattcc	60
ttgtaccctg	atccagaact	gtgggaccag	caccatccgt	ctacttacct	cccttcgggc	120
caagcacacc	caggagaact	gtgagacctg	gggtgtaaat	ggngagacgg	gtactttggt	180
ggacatgaag	gaactgggca	tatgggagcc	attggctgng	aagctgcana	cttataagac	240
agcagtggag	acggcagttc	tgctactgcg	aattgatgac	atcgtttcag	gccacaaaaa	300
gaaaggcgat	gaccanagcc	ggcaaggcgg	ggcttcctga	tgctggacct	cggccgccga	360
ccacgctt						368

<210> 271

<211> 424

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(424)

<223> n = A,T,C or G

<400> 271

agcgtggctg	cggccgaggt	ccactagagg	tctgtgtgcc	attgcccagg	cagagtctct	60
gcgttacaaa	ctcctaggag	ggcttgctgt	gcggagggcc	tqctatggtg	tqctgcgggt	120
catcatggag	agtggggcca	aaggctgcga	ggttggtggtg	tctgggaaac	tccgaggaca	180
gagggctaaa	tccatgaagt	ttgtggatgg	cctgatgata	cacagcggag	accctgttaa	240
ctactacggt	gacactgctg	tgcgccacgt	gttgtctana	caggggtgtgc	tgggcatcaa	300
ggtgaagatc	atgctgccct	gggacccanc	tggcaaaaat	ggcccttaaa	aacccttgc	360
cntgaccacg	tgaaccatth	gtgngaaccc	caagatgaan	atacttgccc	accaccccc	420
attc						424

<210> 272

<211> 541

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(541)

<223> n = A,T,C or G

<400> 272

tcgagcggcc	gcccgggcag	gtctgccaag	gagaccctgt	tatgctgtgg	ggactggctg	60
gggcatggca	ggcggctctg	gcttcccacc	cttctgttct	gagatggggg	tgggtggcag	120
tatctcatct	ttgggttcca	caatgctcac	gtggtcaggc	aggggcttct	tagggccaat	180
cttaccagtt	gggtcccagg	gcagcatgat	cttcaccttg	atgccagca	cacctgtct	240
gagcaacacg	tggcgcacag	cagtgtcaac	gtagtagtta	acagggcttc	cgctgtggat	300
catcaggcca	tccacaaaact	tcatggattt	agccctctgt	cctcggagtt	tccaaaaaca	360
ccacaacctc	gccagccttt	gggccccact	tcttcatgaa	tgaaaccgca	gcacaccatt	420
ancaaggccc	ttccgcacag	gnaagccctt	cctaaggagt	tttgtaaacy	caaaaaactc	480
ttgcctgggg	caaatgggca	cacagacctn	tantnggacc	ttggnccgcg	aaccaccgct	540
t						541

<210> 273

<211> 579

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(579)

<223> n = A,T,C or G

<400> 273

agcgtggtcg	cggccgaggt	ctggccctcc	tggcaaggct	ggtgaagatg	gtcaccctgg	60
aaaacccgga	cgacctggtg	agagaggagt	tggtggacca	cagggtgctc	gtggtttccc	120
tggaactcct	ggacttcctg	gcttcaaagg	cattagggga	cacaatggct	tggtatggatt	180
gaagggacag	cccgtgctc	ctggtgtgaa	gggtgaacct	ggngcccctg	gtgaaaatgg	240
aactccaggt	caaacaggag	cccnggggct	tcctggngag	agaggacgtg	ttggtgcccc	300
tggcccanac	ctgcccgggc	ggccgctcna	aaagccgaaa	tccagnacac	tggcggccgn	360
tactantgga	atccgaactt	cggtaccaa	gcttggccgt	aatcatggcc	atagcttggt	420
ccctggggng	gaaattggta	ttccgctncc	aattccacac	aacataccga	acccggaaag	480
cattaaagtg	taaaagccct	gggggggct	aaatgangtg	agcntaacte	ncattttaatt	540
ggcgttgccg	ttcactgccc	cgcttttcca	gtccgggna			579

<210> 274

<211> 330

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(330)

<223> n = A,T,C or G

<400> 274

tcgagcggcc	gcccgggcag	gtctggggcca	ggggcaccaa	cacgtcctct	ctcaccagga	60
agccacggg	ctcctgtttg	acctggagtt	ccattttcac	caggggcacc	aggttcaccc	120
ttcacaccag	gagcaccggg	ctgtcccttc	aatccatcca	gaccattgtg	ncccctaag	180
cctttgaagc	caggaagtcc	aggagtcca	gggaaaccac	gagcaccctg	tggtccaaca	240
actcctctct	caccaggtcg	tccgggtttt	ccagggtgac	catcttcacc	agccttgcca	300
ggagggccag	acctcgggcc	cgaccacgct				330

<210> 275

<211> 97

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(97)

<223> n = A,T,C or G

<400> 275

ancgtggtcg	cggccgaggt	cctcaccaga	ggtgncacct	acaacatcat	agtggaggca	60
ctgaaagacc	ancagaggca	taagggttcg	gaagagg			97

<210> 276

<211> 610

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature
 <222> (1)...(610)
 <223> n = A,T,C or G

<400> 276
 tcgagcggcc gcccgggcag gtccattttc tccctgacgg tcccacttct ctccaatctt 60
 gtagttcaca ccattgtcat ggcaccatct agatgaatca catctgaaat gaccacttcc 120
 aaagcctaag cactggcaca acagttttaa gcctgattca gacattcggt cccactcatc 180
 tccaacggca taatgggaaa ctgtgtaggg gtcaaagcac gagtcacccg taggttggtt 240
 caagccttcg ttgacagagt tgtccacggg aacaacctct tcccgaacct tatgcctctg 300
 ctggtctttc agtgccctcca ctatgatgtt gtaggtggca cctctggtga ggacctcngn 360
 ccngaacaac gcttaagccc gnattctgca gaataatccc atcacacttg gcggccgctt 420
 cgancatgca tcntaaaagg ggccccaatt tcccccttat aagngaanc gtatttncca 480
 atttctactg nccccgcgnt ttacaaaacg ncggtgaact ggggaaaaac cctggcggtt 540
 acccaacttt aatcgccntt ggcagcacia tccccctttt tcgnccancn tgggcgtaaa 600
 taaccgaaaa 610

<210> 277
 <211> 38
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(38)
 <223> n = A,T,C or G

<400> 277
 ancngggtcg cggccgangt nttttttctt nttttttt 38

<210> 278
 <211> 443
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(443)
 <223> n = A,T,C or G

<400> 278
 agcgtgggtc cggccgaggt ctgagggtac atgcgtgggt gtggacgtga gccacgaaga 60
 ccctgaggtc aagttcaact ggtacgtgga cggcgtggag gtgcataatg ccaagacaaa 120
 gccgcgggag gagcagtaca acagcacgta ccggngggtc agcgtcctca ccgtcctgca 180
 ccagaattgg ttgaatggca aggagtacaa gngcaagggt tccaacaaag cntcccagc 240
 cccntcga aaaccattt ccaaagccaa agggcagccc cgagaaccac aggtgtacac 300
 cctgccccca tcccgggagg aaaagancaa naaccnggtt cagccttaac ttgcttggtc 360
 naangctttt tatcccaacg nacttcccc ntggaantgg gaaaaaccaa tgggccaanc 420
 cgaaaaacaa ttacaanaac ccc 443

<210> 279
 <211> 348
 <212> DNA
 <213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(348)

<223> n = A,T,C or G

<400> 279

tcgagcggcc gcccgggcag gtgtcggagt ccagcacggg aggcgtggtc ttgtagttgt	60
tctccggctg cccattgctc tcccactcca cggcgatgtc gctgggatat aagcctttga	120
ccaggcaggt caggctgacc tggttcttgg tcatctctc ccgggatggg ggcagggtga	180
acacctgggg ttctcggggc ttgccctttg gttttgaana tggttttctc gatgggggct	240
ggaagggtt tggtgnaaac ctgcaactg actccttgcc attcaccag ncctggngca	300
ggacgngag gacnctnacc acacggaacc gggctggtgg actgctcc	348

<210> 280

<211> 149

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(149)

<223> n = A,T,C or G

<400> 280

agcgtggctg cggacgangt cctgtcagag tggcnactgg agaagttcca ngaaccctga	60
actgtaaggg ttcttcatca gtgccaacag gatgacatga aatgatgtac tcagaagnn	120
cctggaatgg ggcccatgan atggttgcc	149

<210> 281

<211> 404

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(404)

<223> n = A,T,C or G

<400> 281

tcgagcggcc gcccgggcag gtccaccaca cccaattcct tgctgggtatc atggcagccg	60
ccacgtgccg ggattaccgg ctacatcatc aagtatgaga agcctgggtc tcctcccaga	120
gaagtgggtc ctcgggcccg ccctgggtgc acagaggcta ctattactgg cctggaaccg	180
ggaaccgaat atacaattta tgtcattgcc ctgaagaata atcagaagag cgagcccctg	240
attggaagga aaaagacaga cgagcttccc caactggtaa cccttccaca ccccaatctt	300
catggaccag agatcttgga tgttccttcc acagttcaaa agacccttt cggcaccccc	360
cctgggtatg aacctgggaa aanggnantt aanccttctt gga	404

<210> 282

<211> 507

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(507)

<223> n = A,T,C or G

<400> 282

agcgtggtcg	cggccgaggt	ctgggatgct	cctgctgtca	cagtgagata	ttacaggatc	60
acttacggag	aaacaggagg	aaatagccct	gtccaggagt	tcactgtgcc	tgggagcaag	120
tctacagcta	ccatcagcgg	ccttaaacct	ggagtgtgatt	ataccatcac	tgtgtatgct	180
gtcactggcc	gtggagacag	ccccgcaagc	agcaagccaa	ttccattaa	ttaccgaaca	240
gaaattgaca	aaccatccca	gatgcaagt	accgatgttc	aggacaacag	cattagtgtc	300
aagtggctgc	cttcaaggt	ccctgggtact	gggttacaga	ntaaccacca	ctcccaaaaa	360
tggaccagga	accacaaaa	cttaaactgc	aggggtccaga	tcaaaacaga	aatgactatt	420
gaangcttgc	agcccacagt	gggagtatgn	gggtagtgn	tatgcttcag	aatccaagcg	480
gaaaaangtc	aagccttntg	ggttcaa				507

<210> 283

<211> 325

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(325)

<223> n = A,T,C or G

<400> 283

tcgagcggcc	gcccgggcag	gtccttgcat	ctctgcagt	tcttcttcac	catcagggtgc	60
agggaaatagc	tcatggattc	catcctcagg	gctcgagtag	gtcaccctgt	acctggaaac	120
ttgcccctgt	gggctttccc	aagcaatttt	gatggaatcg	acatccacat	cagtgaatgc	180
cagtccttta	gggcgatcaa	tgttggttac	tgcagnctga	accagaggct	gactctctcc	240
gcttggtatc	tgagcataga	cactaaccac	atactccact	gtgggctgca	anccttcaat	300
aanncatttc	tgtttgatct	ggacc				325

<210> 284

<211> 331

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(331)

<223> n = A,T,C or G

<400> 284

tcgagcggcc	gcccgggcag	gtctggtggg	gtcctggcac	acgcacatgg	ggngttgnt	60
ctnatccagc	tgcccagccc	ccattggcga	gtttgagaag	gtgtgcagca	atgacaacaa	120
naccttcgac	tcttctctgc	acttctttgc	cacaaagtgc	acctggagg	gcaccaagaa	180
gggcacaaag	ctccacctgg	actacatcgg	gccttgcaaa	tacatcccc	cttgcttggg	240
ctctgagctg	accgaattcc	cccttgcgca	tgccggactg	gctcaagaac	cgtcctggca	300
cccttgatg	anaggatga	agacacnacc	c			331

<210> 285

<211> 509

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(509)

<223> n = A,T,C or G

<400> 285

```

agcgtggtcg cggccgaggt ctgtcctaca gtcttcagga ctctactccc tcagcagcgt      60
ggtgaccgtg ccctccagca acttcggcac ccagacctac acctgcaacg tagatcacia      120
gcccagcaac accaaggtgg acaagagagt tgagcccaaa tcttgtgaca aaactcacac      180
atgcccaccg tggccagcac ctgaactcct ggggggaccg tcagtcttcc tcttcccccg      240
catccccctt ccaaacctgc ccgggcggcc gctcgaaagc cgaattccag cacactggcg      300
gccggtacta gtgganccna acttggnanc caacctggng gaantaatgg gcataanctg      360
tttctggggg gaaattggta tccngtttac aattcccnca caacatacga gccggaagca      420
taaaagngta aaagcctggg gngggcctan tgaagtgaag ctaaactcac attaattngc      480
gttgccgctc actggcccg ctttccagc                                     509

```

<210> 286

<211> 336

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(336)

<223> n = A,T,C or G

<400> 286

```

tcgagcggcc gcccgggcag gtttggaagg gggatgcggg ggaagaggaa gactgacggt      60
ccccccagga gttcaggtgc tgggcacggt gggcatgtgt gagttttgtc acaagatttg      120
ggctcaactc tcttgtccac ctttgtgttg ctgggcttgt gatctacgtt gcagggtgtag      180
gtctgggngc cgaagttgct ggagggcacg gtcaccacgc tgctgaggga gtagagtcct      240
gaggactgta ngacagacct cggccgngac cagcctaagc cgaattctgc agatatccat      300
cacactggcg gccgctccga gcatgcattt tagagg                                     336

```

<210> 287

<211> 30

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(30)

<223> n = A,T,C or G

<400> 287

```

agcgtggncc cggacganga caacaacccc                                     30

```

<210> 288

<211> 316

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(316)

<223> n = A,T,C or G

<400> 288

tcgagcggcc	gcccgggcag	gnccacatcg	gcagggtcgg	agccctggcc	gccatactcg	60
aactggaatc	catcggtcat	gctcttgccg	aaccagacat	gcctcttgtc	cttgggggttc	120
ttgctgatgn	accagttctt	ctggggccaca	ctgggctgag	tggggtacac	gcaggtctca	180
ccagtctcca	tgttgagaa	gactttgatg	gcattccaggt	tgcagccttg	gttgggggtca	240
atccagtact	ctccactctt	ccagtcagag	tggcacatct	tgaggtcacg	gcaggtgcgg	300
gcgggggttct	tgacct					316

<210> 289

<211> 308

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(308)

<223> n = A,T,C or G

<400> 289

agcgtggtcg	cggccgaggt	ccagcctgga	gataanggtg	aaagtggtgc	ccccggacct	60
ccaggtatag	ctggacctcg	tggtagccct	ggtgagagag	gtgaaactgg	ccctccagga	120
cctgctggtt	tccctggtgc	tccctggacag	aatggtgaac	ctggnggtaa	aggagaaaaga	180
ggggtcccg	ntganaaagg	tgaaggaggc	cctcctgnat	tggcaggggc	cccangacct	240
agaggtggag	ctggccccc	tggcccccga	ggaggaaaagg	gtgctgctgg	tccctcctggg	300
ccacctgg						308

<210> 290

<211> 324

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(324)

<223> n = A,T,C or G

<400> 290

tcgagcggcc	gcccgggcag	gtctggggcca	ggaggaccaa	taggaccagt	aggacccctt	60
gggccatctt	tccctgggac	accatcagca	cctggaccgc	ctggttcacc	cttgtcaccc	120
tttggaccag	gacttccaag	acctcctctt	tctccaggca	ttccttgacg	accaggagta	180
ccancagcac	caggtggccc	aggaggacca	gcagcaccct	ttcctccttc	gggaccaggg	240
ggaccagctc	cacctctaag	tccctggggcc	cctgccaatc	caggaggggc	tccttcacct	300
ttctcacccg	gagccctctt	ttct				324

<210> 291

<211> 278

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(278)

<223> n = A,T,C or G

<400> 291
 tcgagcggcc gcccgggcag gtccaccggg atattcgggg gtctggcagg aatgggaggc 60
 atccagaacg agaaggagac catgcaaagc ctgaacgacc gcctggcctc ttacctggac 120
 agagtgagga gcctggagac cgacaaccgg aggctggaga gcaaaatccg ggagcacttg 180
 gagaagaagg gacccacaggt cagagactgg agccattact tcaagatcat cgaggacctg 240
 agggctcana ttttcgcaaa tactgcngac aatgcccc 278

<210> 292
 <211> 299
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(299)
 <223> n = A,T,C or G

<400> 292
 atgcgnggtc gcggccgang accanctctg gctcatactt gactctaaag nntcaccag 60
 nanttacggn cattgccaat ctgcagaacg atgcgggcat tgtccgcant atttgcgaag 120
 atctgagccc tcaggnccctc gatgatcttg aagtaanggc tccagtctct gacctggggt 180
 cccttcttct ccaagtgtct ccggattttg ctctccagcc tccggttctc ggtctccaag 240
 ncttctcact ctgtccagga aaagaggcca ggcgngcgat cagggctttt gcatggact 299

<210> 293
 <211> 101
 <212> DNA
 <213> Homo sapien

<400> 293
 agcgtgggtc cggccgaggt tgtacaagct tttttttttt tttttttttt tttttttttt 60
 tttttttttt tttttttttt tttttttttt tttttttttt t 101

<210> 294
 <211> 285
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(285)
 <223> n = A,T,C or G

<400> 294
 tcgagcggcc gcccgggcag gtctgccaac accaagattg gccccgcgcg catccacaca 60
 gttngtgtgc ggggaggtaa caagaaatac cgtgccctga ggntggacgn ggggaatttc 120
 tcctggggct cagagtgttg tactcgtaaa acaaggatca tcgatgttgt ctacaatgca 180
 tctaataacg agctggttcg taccaagacc ctggtgaaga attgcatcgt gctcatngac 240
 agcacaccgt accgacagtg ggtaccgaag tccactatg cncct 285

<210> 295
 <211> 216
 <212> DNA
 <213> Homo sapien

<400> 295

tcgagcggcc	gcccgggcag	gtccaccaca	cccaattcct	tgctgggtatc	atggcagccg	60
ccacgtgcc	ggattaccgg	ctacatcatc	aagtatgaga	agcctgggtc	tcctcccaga	120
gaagtgggtcc	ctcggccccg	ccctgggtgc	acagaggcta	ctattactgg	cctggaaccg	180
ggaaccgaat	atacaattta	tgtcattgcc	ctgaag			216

<210> 296

<211> 414

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(414)

<223> n = A,T,C or G

<400> 296

agcgtgntcn	cggccgagga	tggggaaagct	cgnetgtctt	tttccttcca	atcaggggct	60
nnntcttctg	attattcttc	agggcaanga	cataaattgt	atattcggt	cccgggtcca	120
gnccagtaat	agtagcctct	gtgacaccag	ggcggggccg	agggaccact	tctctgggag	180
gagacccagg	cttctcatac	ttgatgatga	agccggtaat	cctggcacgt	gggcggctgc	240
catgatacca	ccaangaatt	gggtgtgggtg	gacctgcccg	ggcggggccg	tcgaaaancc	300
gaattcntgc	aagaatatcc	atcacacttg	ggcggggccgn	tcgaaccatg	catcntaaaa	360
gggccccaat	ttcccccta	ttagnggaag	ccncatttaa	caaattccac	ttgg	414

<210> 297

<211> 376

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(376)

<223> n = A,T,C or G

<400> 297

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cccggccctc	ctggacctcc	tggtccccct	ggtcctccca	gcgctgggtt	cgacttcagc	120
ttcctgcccc	agccacctca	agagaaggct	cacgatgggtg	gccgctacta	ccgggctgat	180
gatgccaatg	tggttcgtga	ccgtgacctc	gaggtggaca	ccacctcaa	gagccttgag	240
ccagcagaat	cgaaaacatt	cggaacccaa	gaagggcaag	cccgcaaaga	aaccccgccc	300
gcacctggcc	gngaacctcc	aagaangtgc	ccacntcttg	actgggaaaa	aaagggaaaa	360
ntacttgga	ttggac					376

<210> 298

<211> 357

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(357)

<223> n = A,T,C or G

<400> 298

agcgtgggtcg	cggccgaggt	ccacatcggc	agggtcggag	ccctggccgc	catactcgaa	60
ctggaatcca	tcggtcatgc	tctcgccgaa	ccagacatgc	ctcttgctct	tggggttctt	120
gctgatgtac	cagttcttct	gggccacact	gggctgagtg	gggtacacgc	aggtctcacc	180
agtctccatg	ttgcagaaga	ctttgatggc	atccagggtg	cagccttggt	tggggccaat	240
ccagtactct	ccactcttcc	agtcagaagt	ggcacatctt	gaggtcacgg	caggggtcgg	300
gcgggggttct	tgcgggctgc	ccttctgggc	tcccgaatg	ttctnngaac	ttgctgg	357

<210> 299

<211> 307

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(307)

<223> n = A,T,C or G

<400> 299

agcgtgggtcg	cggccgaggt	ccactagagg	tctgtgtgcc	attgcccagg	cagagtctct	60
gcgttacaaa	ctcctaggag	ggcttgctgt	gcggaggggc	tgctatggtg	tgctgcgggt	120
catcatggag	agtggggcca	aaggctgcga	ggttggtgtg	tctgggaaac	tccgaggaca	180
gagggctaaa	tccatgaagt	ttgtggatgg	cctgatgatc	cacagcggag	accctgttaa	240
ctactacgtt	gacacttgct	tgtgcgccac	gtgttgctca	nacanggggtg	ggctgggcat	300
caaggng						307

<210> 300

<211> 351

<212> DNA

<213> Homo sapien

<400> 300

tcgagcggcc	gcccgggcag	gtctgccaa	gagaccctgt	tatgctgtgg	ggactggctg	60
gggcatggca	ggcggctctg	gcttcccacc	cttctgttct	gagatggggg	tggtgggcag	120
tatctcatct	ttgggttcca	caatgctcac	gtggtcaggc	aggggcttct	tagggccaat	180
cttaccagtt	gggtcccagg	gcagcatgat	cttcaccttg	atgccagca	caccctgtct	240
gagcaacacg	tggcgcacag	caagtgtcaa	cgtaagtaag	ttaacagggt	ctccgctgtg	300
gatcatcagg	ccatccacaa	acttcatgga	tttaaccctc	tgtcctcgga	g	351

<210> 301

<211> 330

<212> DNA

<213> Homo sapien

<400> 301

tcgagcggcc	gcccgggcag	gtgtttcaga	ggttccaagg	tccactgtgg	aggtcccagg	60
agtgtctggtg	gtgggcacag	aggtccgatg	ggtgaaacca	ttgacataga	gactgttcct	120
gtccaggggtg	taggggcca	gctctttgat	gccattggcc	agttggctca	gctcccagta	180
cagccgctct	ctgttgagtc	cagggctttt	ggggccaaga	tgatggatgc	agatggcatc	240
cactccagtg	gctgtcccat	ccttctcgga	cctgagagag	gtcagtctgc	agccagagta	300
cagagggcca	acactggtgt	tctttgaata				330

<210> 302

<211> 317

<212> DNA

<213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(317)
 <223> n = A,T,C or G

<400> 302
 agcgtgggtcg cggccgaggt ctgtactggg agctaagcaa actgaccaat gacattgaag 60
 agctggggccc ctacaccctg gacaggaaca gtctctatgt caatgggttc acccatcaga 120
 gctctgtgnc caccaccagc actcctggga cctccacagt ggatttcaga acctcaggga 180
 ctccatcctc cctctccagc cccacaatta tggctgctgg ccctctcctg gtaccattca 240
 ccctcaactt caccatcacc aacctgcagt atgggggagga catgggtcac cctgnctcca 300
 ggaagttcaa caccaca 317

<210> 303
 <211> 283
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(283)
 <223> n = A,T,C or G

<400> 303
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 ggtctggcac cctgagcagt ccagcgagga cttggtctta gttgagcaat ttggctagga 120
 ggatagtatg cagcacggnt ctgagncgtg gggatagctg ccatgaagta acctgaagga 180
 ggtgctggct ggtanggggt gattacaggg ttgggaacag ctcgtaact tgccattctc 240
 tgcataact ggtagtgag gtgagcctgg ccctcttctt ttg 283

<210> 304
 <211> 72
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(72)
 <223> n = A,T,C or G

<400> 304
 agcgtgggtcg cggccgaggt gagccacagg tgaccggggc tgaagctggg gctgctggnc 60
 ctgctgggtcc tg 72

<210> 305
 <211> 245
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(245)
 <223> n = A,T,C or G

<400> 305

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tggggccagc	aggaccgacc	tcaccacgtt	caccagggct	tccccgagga	ccagcaggac	180
cagcaggacc	agcagcccca	gcttcgcccc	ggtcacctgt	ggctcacctc	ggccgcgacc	240
acgct						245

<210> 306

<211> 246

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(246)

<223> n = A,T,C or G

<400> 306

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agagtgagga	gcctggagac	cganaaccgg	aggctggana	gcaaaatccg	ggagcacttg	180
gagaagaagg	gaccccaggt	caagagactg	gagccattac	ttcaagatca	tcgagggacc	240
tggagg						246

<210> 307

<211> 333

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(333)

<223> n = A,T,C or G

<400> 307

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aagacgggca	ttgtcaatct	gcagaacgat	gcgggcattg	tccgcagtat	ttgcgaagat	120
ctgagccctc	aggctcctga	tgatcttgaa	gtaatggctc	cagtctctga	cctgggggtcc	180
cttctttctc	aagtgtctcc	ggattttgct	ctccagcctc	cggttctcgg	tctccaggct	240
cctcactctg	tccaggtaag	aaggcccagg	cggtcgttca	ggctttgcat	ggtctccttc	300
tcgttctgga	tgccctcccat	tcctgccaga	ccc			333

<210> 308

<211> 310

<212> DNA

<213> Homo sapien

<400> 308

tcgagcggcc	gcccgggcag	gtcaggaagc	acattgggtct	tagagccact	gcctcctgga	60
ttccacctgt	gctgcggaca	tctccaggga	gtgcagaagg	gaagcagggtc	aaactgctca	120
gatcagtcag	actggctggt	ctcagttctc	acctgagcaa	ggtcagtctg	cagccagagt	180
acagagggcc	aacactgggt	ttcttgaaca	agggttgag	cagaccctgc	agaaccctct	240
tccgtggtgt	tgaacttcct	ggaaaccagg	gtgttgcatg	tttttctca	taatgcaagg	300
ttggtgatgg						310

<210> 309
<211> 429
<212> DNA
<213> Homo sapien

<400> 309
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<210> 310
<211> 430
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(430)
<223> n = A,T,C or G

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<210> 311
<211> 2996
<212> DNA
<213> Homo sapien

<400> 311
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<210> 312

<211> 914

<212> PRT

<213> Homo sapien

<400> 312

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          20          25          30
Asn Leu Val Pro Arg Leu Pro Ala Leu Ser Trp Cys Tyr Ser Leu Ser
          35          40          45
Thr Ser Pro Ser Pro Thr Cys Gly Met Arg Arg Thr Cys Ser Thr Leu
          50          55          60
Ala Pro Gly Ser Ser Thr Pro Arg Arg Gly Ser Phe Arg Ala Trp Ser
65          70          75          80
Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu
          85          90          95

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Thr Leu Leu Arg Pro Glu Lys Asp Gly Thr Ala Thr Gly Val Asp Ala
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 Ile Cys Thr His His Pro Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu
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 Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu
 130 135 140
 Gly Pro Tyr Ala Leu Asp Asn Asp Ser Leu Phe Val Asn Gly Phe Thr
 145 150 155 160
 His Arg Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Pro Thr Val
 165 170 175
 Tyr Leu Gly Ala Ser Lys Thr Pro Ala Ser Ile Phe Gly Pro Ser Ala
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 Ala Ser His Leu Leu Ile Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn
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 Leu Arg Tyr Glu Glu Asn Met Trp Pro Gly Ser Arg Lys Phe Asn Thr
 210 215 220
 Thr Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr
 225 230 235 240
 Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro
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 Glu Lys Asp Gly Glu Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg
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 Pro Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Gln Leu Tyr Leu Glu
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 Pro Thr Thr Ser Thr Gly Val Val Ser Glu Glu Pro Phe Thr Leu Asn
 325 330 335
 Phe Thr Ile Asn Asn Leu Arg Tyr Met Ala Asp Met Gly Gln Pro Gly
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 Ser Leu Lys Phe Asn Ile Thr Asp Asn Val Met Lys His Leu Leu Ser
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 Pro Leu Phe Gln Arg Ser Ser Leu Gly Ala Arg Tyr Thr Gly Cys Arg
 370 375 380
 Val Ile Ala Leu Arg Ser Val Lys Asn Gly Ala Glu Thr Arg Val Asp
 385 390 395 400
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 Lys Gln Val Phe His Glu Leu Ser Gln Gln Thr His Gly Ile Thr Arg
 420 425 430
 Leu Gly Pro Tyr Ser Leu Asp Lys Asp Ser Leu Tyr Leu Asn Gly Tyr
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 Asn Glu Pro Gly Pro Asp Glu Pro Pro Thr Thr Pro Lys Pro Ala Thr
 450 455 460
 Thr Phe Leu Pro Pro Leu Ser Glu Ala Thr Thr Ala Met Gly Tyr His
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 Leu Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser Asn Leu Gln Tyr Ser
 485 490 495
 Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser Thr Glu Gly Val
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 Leu Gln His Leu Leu Arg Pro Leu Phe Gln Lys Ser Ser Met Gly Pro
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 Phe Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg Pro Glu Lys Asp Gly

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545	550	555
Gly Pro Gly Leu Asp	Ile Gln Gln Leu Tyr Trp	Glu Leu Ser Gln Leu
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Thr His Gly Val Thr	Gln Leu Gly Phe Tyr Val	Leu Asp Arg Asp Ser
580	585	590
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595	600	605
Tyr Gln Ile Asn Phe His	Ile Val Asn Trp Asn	Leu Ser Asn Pro Asp
610	615	620
Pro Thr Ser Ser Glu Tyr	Ile Thr Leu Leu Arg	Asp Ile Gln Asp Lys
625	630	635
Val Thr Thr Leu Tyr	Lys Gly Ser Gln Leu His	Asp Thr Phe Arg Phe
645	650	655
Cys Leu Val Thr Asn	Leu Thr Met Asp Ser	Val Leu Val Thr Val Lys
660	665	670
Ala Leu Phe Ser Ser Asn	Leu Asp Pro Ser Leu	Val Glu Gln Val Phe
675	680	685
Leu Asp Lys Thr Leu Asn	Ala Ser Phe His Trp	Leu Gly Ser Thr Tyr
690	695	700
Gln Leu Val Asp Ile His	Val Thr Glu Met Glu	Ser Ser Val Tyr Gln
705	710	715
Pro Thr Ser Ser Ser	Ser Thr Gln His Phe Tyr	Leu Asn Phe Thr Ile
725	730	735
Thr Asn Leu Pro Tyr	Ser Gln Asp Lys Ala Gln	Pro Gly Thr Thr Asn
740	745	750
Tyr Gln Arg Asn Lys	Arg Asn Ile Glu Asp	Ala Leu Asn Gln Leu Phe
755	760	765
Arg Asn Ser Ser Ile Lys	Ser Tyr Phe Ser Asp	Cys Gln Val Ser Thr
770	775	780
Phe Arg Ser Val Pro	Asn Arg His His Thr	Gly Val Asp Ser Leu Cys
785	790	795
Asn Phe Ser Pro Leu	Ala Arg Arg Val Asp	Arg Val Ala Ile Tyr Glu
805	810	815
Glu Phe Leu Arg Met	Thr Arg Asn Gly Thr	Gln Leu Gln Asn Phe Thr
820	825	830
Leu Asp Arg Ser Ser	Val Leu Val Asp Gly Tyr	Phe Pro Asn Arg Asn
835	840	845
Glu Pro Leu Thr Gly	Asn Ser Asp Leu Pro	Phe Trp Ala Val Ile Leu
850	855	860
Ile Gly Leu Ala Gly	Leu Leu Gly Leu Ile	Thr Cys Leu Ile Cys Gly
865	870	875
Val Leu Val Thr Thr	Arg Arg Arg Lys Lys	Glu Gly Glu Tyr Asn Val
885	890	895
Gln Gln Gln Cys Pro	Gly Tyr Tyr Gln Ser	His Leu Asp Leu Glu Asp
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Leu Gln		

<210> 313

<211> 656

<212> DNA

<213> Homo sapiens

<400> 313

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tgggggtcat cttgggcctc gtcacatggt taacactcgc gatttaccac gtccaccaca 480
aaatgactgc caaccaggtg cagatccctc gggacagatc ccagtataag cacatgggct 540
agaggccgtt aggcaggcac cccctattcc tgctccccc actggatcag gtagaacaac 600
aaaagcactt ttccatcttg tacacgagat acaccaacat agctacaatc aaacag 656
```

<210> 314

<211> 519

<212> DNA

<213> Homo sapiens

<400> 314

```
tgtgcgtgga ccagtcagct tccgggtgtg actggagcag ggcttgctgt cttcttcaga 60
gtcactttgc aggggttggg gaagctgctc ccatccatgt acagctccca gtctactgat 120
gtttaaggat ggtctcggtg gttaggccca ctagaataaa ctgagtccaa tacctctaca 180
cagttatggt taactgggct ctctgacacc gggaggaagg tggcggggtt taggtgttgc 240
aaacttcaat ggttatgcgg ggatgttccac agagcaagct ttggtatcta gctagtctag 300
cattcattag ctaatggtgt cctttggtat ttattaaaat caccacagca tagggggact 360
ttatgtttag gttttgtcta agagttagct tatctgcttc ttgtgctaac agggctattg 420
ctaccaggga ctttgacat gggggccagc gtttgaaac ctcatctagt tttttgaga 480
gataggccac tggccttgga cctcgccgc gaccacgt 519
```

<210> 315

<211> 441

<212> DNA

<213> Homo sapiens

<400> 315

```
cacagagcgt ttattgacac caccactcct gaaaattggg atttcttatt aggttccct 60
aaaagttccc atgttgatta catgtaaata gtcacatata tacaatgaag gcagtttctt 120
cagaggcaac cagggtttat agtgctaggt aaatgtcatc tcttttggtc tactgactca 180
ttgtcaaagc tctctgcact gttttcagcc tctccacgtt gctctgtcc tgcttcttag 240
ttccttcttt gtgacaaacc aaaagaataa gaggatttag aacaggactg cttttccct 300
atgatttaaa aattccaatg actttcgccc ttgggagaaa tttccaagga aatctctctc 360
gctcgctctc tccgttttcc tttgtgagct tctgggggag ggtagtggt gactttttga 420
tacgaaaaaa tgcattttgt g 441
```

<210> 316

<211> 247

<212> DNA

<213> Homo sapiens

<400> 316

```
tggcgcggt gctggatttc accttcttgc acctgccggt gagcgctggt ggtctaaagg 60
ggcgggatac tccattatgg cccctcgccc tgtagggtct gaatagttag aaaaggcaac 120
ccagtctagc ttggtaagaa gagagacatg cccccaacct cggcgccctt tttctcacg 180
atctgctgtc cttacttcag cgactgcagg agcttcacct gcaagaaaac agcattgagc 240
tgctgac 247
```

<210> 317
<211> 409
<212> DNA
<213> Homo sapiens

<400> 317
tgacagggct cctggagttg ttaagtcacc aagtagctgc aggggatgga cactgccccca 60
cacgatgtgg gatgaacagc agccttggtt tgtagcccag ggtgtccatg gatttgaccc 120
gaatgctccc tggaggccct gtggcgagga caggcactgg atgggtccaga ccctctggct 180
ggaggagtgg tggagccagg actgggcctt cagccatgag ggctagaata acctgacctc 240
ttgcattcta aactgggtc attaatgaca cttttccagt ggatgttgca aaaaccaaca 300
ctgtcaggaa cctggccctg ggagggtca ggtgagctca caaggagagg tcaagccaag 360
ccaaagggta ggkaacacac aacaccaggg gaaaccagcc cccaaacca 409

<210> 318
<211> 320
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)... (320)
<223> n = A,T,C or G

<400> 318
caaggnagat cttaagnngg gtcntatgta agtgtgtctc tggctccagg gttcctggag 60
cctcacgagg tcaggggaac ccttgtagaa ctccaccagc agcatcatct cgtgaaggat 120
gtcattgggtc aggaagctgt cctggacgta ggccatctcc acatccatgg ggatgccata 180
gtcactgggc ctttgctcgg gaggagcat caccagaaa ggcgagatct tggactcggg 240
gcctgggttg ccagaatagt aaggggagca naggagggcg aggcagggtt ggaagccatt 300
gctggagccc tgcagccgca 320

<210> 319
<211> 212
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)... (212)
<223> n = A,T,C or G

<400> 319
tgaagcaata ggcggcccat tttacaggcg gagcatggaa gccagagagg tgggtggggg 60
aggggggtcct tccctggctc aggcagatgg gaagatgagg aagccgctga agacgctgtc 120
ggcctcagag ccctggtaaa tgtgaccctt tttgggtct ttttcaacct anacctgggtc 180
acctgtgtgc agacctcggc cgcgaccacg ct 212

<210> 320
<211> 769
<212> DNA
<213> Homo sapiens

<400> 320

```

tggaggtgta gcaagtgaag gagatytcat gcaagagtgt cacagcagag ccctaaascc 60
tccaactcac cagtgaagaga tgagactgcc cagtactcag ccttcactctc ctgggccacc 120
tggagggcgt ctttctccat cagcgcatac tgagcagggg tactcagatc cttcttgga 180
cctacaagga agagaagcac actggaaggg tcattctcct tcagggcatc ggccagccac 240
tgcctgccat gggaggtgga aagtaaggga tgagtgaagc tgcagggccc ctccactga 300
cattcatagg cccaattacc cctctctctg tctacatgc attcttcttc ttcctgacca 360
ccctctgtt ctgaaccctc tcttcccgga gcctccatt atattgcagg atgctcactt 420
acttggtatg ttccagagat gccacatcat tcaggttgaa gacaatgatg atggcttgga 480
agagtggcag aaacagcccc aggttgacag ggaagacact actgctcatt tccccaatcc 540
ttccagctcc atatgagaaa gccatgtgca ctctgagacc cacctacccc acttcaccca 600
gccccttacc ttgagctcct ctatagtagg ttgatgcaat gcatttgaaac ctctcctgcc 660
cagcggatc ccaactggaa ggaaggaaga gtgaagcaca ggtatgtatc ttgggggggtg 720
tgggtgctgg ggagaaggga tagctggaag ggggtgaggaa gcactcaca 769

```

<210> 321

<211> 690

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(690)

<223> n = A,T,C or G

<400> 321

```

tgggctgtgg gcggcacctg tgctctgcag gccagacagc gatagaagcc tttgtctgtg 60
cctactcccc cggaggcaac tgggaggtca acgggaagac aatcatcccc tataagaagg 120
gtgcctggtg ttcgctctgc acagccagtg tctcaggctg cttcaaagcc tgggaccatg 180
caggggggct ctgtgaggtc cccaggaatc cttgtcgcac gagctgccag aaccatggac 240
gtctcaacat cagcacctgc cactgccact gtccccctgg ctacacgggc agatactgcc 300
aagtgaggtg cagcctgcag tgtgtgcacg gccggttccg ggaggaggag tgctcgtgcg 360
tctgtgacat cggctacggg ggagcccagt gtgccaccaa ggtgcatttt ccctccaca 420
cctgtgacct gaggatcgac ggagactgct tcatggtgtc ttcagaggca gacacctatt 480
acagaagcca ggatgaaatg tcagaggaat ggcggggtgc tggcccagat caagagccag 540
aaagtgcagg acatcctcgc cttctatctg ggccgctgg agaccaccaa cgaggtgact 600
gacagtgact ttgagaccag gaacttctgg atngggctca cctacaagac cgccaaggac 660
tccctnecgt gggccacagc ggagcaccag

```

<210> 322

<211> 104

<212> DNA

<213> Homo sapiens

<400> 322

```

gtcgcaagcc ggagcaccac catgtagcct ttcccgaagt accggacctt ctctctctcc 60
acgctcacat cacggacatc atggagcagg accaccacct ggtc 104

```

<210> 323

<211> 118

<212> DNA

<213> Homo sapiens

<400> 323

```

gggccctggg cgcttccaaa tgaccagga ggtggtctgc gacgaatgcc ctaatgtcaa 60
actagtgaat gaagaacgaa cactggaagt agaaatagag cctggggtga gagacgga 118

```

<210> 324
<211> 354
<212> DNA
<213> Homo sapiens

<400> 324
tgctctccgg gagcttgaag aagaaactgg ctacaaaggg gacattgccg aatgttctcc 60
agcggctctgt atggacccag gcttgtcaaa ctgtactata cacatcgtga cagtcaccat 120
taacggagat gatgccgaaa acgcaaggcc gaagccaaag ccaggggatg gagagtttgt 180
ggaagtcatt tctttaccca agaatgacct gctgcagaga cttgatgctc tggtagctga 240
agaacatctc acagtggacg ccaggggtcta ttcctacgct ctagcgctga aacatgcaaa 300
tgcaaaagcca tttgaagtgc ctttcttgaa attttaagcc caaatatgac actg 354

<210> 325
<211> 642
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(642)
<223> n = A,T,C or G

<400> 325
ncatgcttga atgggctcct ggtgagagat tgccccctgg tggtgaaaca atcgtgtgtg 60
cccactgata ccaagaccaa tgaaagagac acagttaagc agcaatccat ctcatattcca 120
ggcacttcaa taggtcgtg attggtcctt gcaccagcag tggtagtcgt acctatttca 180
gagaggtctg aaattcaggt tcttagtttg ccagggacag gccctacctt atattttttt 240
ccatcttcat catccacttc tgcttacagt ttgtgctta caataactta atgatggatt 300
gagttatctg ggtggtctct agccatctgg gcagtgtggg tctgtctaac caaagggcat 360
tggectcaaa ccctgcattt ggtttagggg ctaacagagc tcctcagata atcttcacac 420
acatgtaact gctggagatc ttattctatt atgaataaga aacgagaagt ttttccaaag 480
tgtagtcag gatctgaagg ctgtcattca gataaccag cttttccttt tggcttttag 540
cccattcaga ctttgccaga gtcaagccaa ggattgcttt tttgctacag ttttctgcca 600
aatggcctag ttcctgagta cctggaaacc agagagaaag ag 642

<210> 326
<211> 455
<212> DNA
<213> Homo sapiens

<400> 326
tccgtgagga tgagcttcga gtccttcacc aggcactgca ggggcacagt cacgtcaatc 60
accttcacct tctcgtctct cctgctcttg tcattgacaa acttcccgtta ccaggcattg 120
acgatgatga ggcccattct ggactcttct gcctcaatta tccttcggac agattcctgc 180
atcagccgga cagcggactc cgctctctgc ttcttctgca gcacatcggg ggcggcgctt 240
tccctctgct tctccaattc cttctcttct tgagccctga ggtatggttt gatgatcaga 300
cgggtgcatgg caaagtagac cactagaggc cccacgggtg catagaacat ggcgctgggc 360
agaagctggg ccgtcaagtg aatagggaag aagtatgtct gactggccct gttgagcttg 420
actttgagag aaacgccctg tggaaactca acgct 455

<210> 327
<211> 321
<212> DNA

<213> Homo sapiens

<400> 327

```

ttcactgtga actcgagtc ctcgatgaac tcgcacagat gtgacagccc tgtctccttg 60
ctctctgagt tctcttcaat gatgctgatg atgcagtcca cgatagcgcg cttataactca 120
aagccaccct cttcccgcag catggtgaac aggaagttca taaggacggc gtgtttgcga 180
ggatatttct gacacagggc actgatggcc tggacaacca ccaccttgaa ttcattccgag 240
atttctgaca tgaaggagga gatctgcttc atgaggcggt cgatgctgct ctgctgccc 300
gtcttaagga ggggtggtgat g                                     321

```

<210> 328

<211> 476

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(476)

<223> n = A,T,C or G

<400> 328

```

tgcaggaggg gccatggggg ctgtgaatgg gatgcagccc catggtgtcc ctgataaatc 60
cagtgtgcag tctgatgaag tctgggtggg tgtggtctac gggctggcag ctaccatgat 120
ccaagaggta atgcactcct tttcccatct ctccaccatc tgtatcctgg ccmagaaaaa 180
cttcccttca aaccaaccaa aatttctttt caaaggcata acccaaatgc catccttggg 240
ccggtctaat aaagcctccc ccatttttcc cctgggtatgc attcccaggc tccctggcct 300
tncagggett nctgtctgtg ggtcatagtt tatctcctcc cacttgctgg gagtccttg 360
aaggcaaaga ctctactgcc tccatctatc cagtggaaat ggctcttcag aggggtgcaa 420
gttagtatgt atgactgtca tctctcccaa cagggcctga cttggsaggg cttcca 476

```

<210> 329

<211> 340

<212> DNA

<213> Homo sapiens

<400> 329

```

cgaggagat tgccagcacc ctgatggaga gtgagatgat ggagatcttg tcagtgtctag 60
ctaagggtga ccacagccct gtcacaaggg ctgctgcagc ctgcctggac aaagcagtgg 120
aatatgggct tatccaaccc aaccaagatg gagagtgagg gggttgtccc tgggcccag 180
gctcatgcac acgctaccta ttgtggcacg gagagtaagg acggaagcag ctttggtctg 240
tggtggctgg catgcccaat actcttgccc atcctcgctt gctgccctag gatgtcctct 300
gttctgagtc agcggccacg ttcagtcaca cagccctgct                                     340

```

<210> 330

<211> 277

<212> DNA

<213> Homo sapiens

<400> 330

```

tgtcaccatc acattggtgc caaataccca gaagacatcg tagatgaaga gtccgcccag 60
caggatgcag ccagtgtctga cattgttgag gtgcaggagc tctactccat taaggagagaa 120
ggccaggcca aaaaggttgt tggcaatcca gtgcttcttc agcaggtagc agacgccaac 180
gatgctgctc aggcccaggc acaccaggtc cttggtgtca aattcataat tgatgatctc 240
ctccttgttt tcccagaacc ctgtgtgaag agcagac                                     277

```

<210> 331
<211> 136
<212> DNA
<213> Homo sapiens

<400> 331
ttgcttccca cctcctttct ctgtcctctc ctgaggttct gccttacaat ggggacactg 60
atacaaacca cacacacaat gaggatgaaa acagataaca ggtaaaatga cctcacctgc 120
ccgggcggcc gctcga 136

<210> 332
<211> 184
<212> DNA
<213> Homo sapiens

<400> 332
ttgtgagata aacgcagata ctgcaatgca ttaaaacgct tgaaatactc atcagggatg 60
ttgctgatct tattgttgct taagtagaga gttagaagag agacagggag accagaaggc 120
agtctggcta tctgattgaa gctcaagtca aggtattcga gtgatttaag acctttaaaa 180
gcag 184

<210> 333
<211> 384
<212> DNA
<213> Homo sapiens

<400> 333
cggaaaactt cgaggaattg ctcaaagtgc tgggggtgaa tgtgatgctg aggaagattg 60
ctgtggctgc agcgtccaag ccagcagtgg agatcaaaca ggagggagac actttctaca 120
tcaaaacctc caccaccgtg cgcaccacag agattaactt caagggtggg gaggagtgtg 180
aggagcagac tgtggatggg aggcctgta agagcctggt gaaatgggag agtgagaata 240
aaatggtctg tgagcagaag ctctgaagg gagagggccc caagacctcg tggaccagag 300
aactgaccaa cgatggggaa ctgatcctga ccatgacggc ggatgacgtt gtgtgcacca 360
gggtctacgt ccgagagtga gcgg 384

<210> 334
<211> 169
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(169)
<223> n = A,T,C or G

<400> 334
cnacaaacag agcagacacc ctggatccgg tcttgctact ggccaggacg gctggaccgt 60
aaaattgaat ttccacttcc tgaccgccgc cagaagagat tgattttctc cactatcact 120
agcaagatga acctctctga ggaggttgac ttggaagact atgtngccc 169

<210> 335
<211> 185
<212> DNA
<213> Homo sapiens

<400> 335

ccaggtttgc agcccaggct gcacatcagg ggactgcctc gcaatacttc atgctgttgc 60
tgctgactga tgggtgctgtg acggatgtgg aagccacacg tgaggctgtg gtgcgtgcct 120
cgaacctgcc catgtcagtg atcattgtgg gtgtgggtgg tgctgacttt gaggccatgg 180
agcag 185

<210> 336

<211> 358

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(358)

<223> n = A,T,C or G

<400> 336

ctgcccctgc cttacggcgg ccaganacac acccaggatg gcattggccc caaacttggg 60
tttgtttctca gtcccatcca actccagcat caggttgtcc agtttctctt gtcaccacac 120
agagagacct gagctgatga gggctggcgc gatggtggag ttgatgtggt ccaactgcctt 180
caggacacct ttgcctaagt aacgctgttt gtctccatcc ctcagctcca gggcctcata 240
gatgcccgtg gaggtccac tgggcaactgc agcccggaaa agacctttgg cagtatagag 300
atccacctcc actgtggggg tcccgcggga gtccaggatc tcccgggccc agatcttc 358

<210> 337

<211> 271

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(271)

<223> n = A,T,C or G

<400> 337

cacaaagcca ccagccnggg aaatcagaat ttacttgatg caactgactt gtaatagcca 60
gaaatcctgc ccagcatggg attcagaacc tgggtctgcaa ccaaatccac cgtcaaagtt 120
catacaggat aaaacaaatt caattgcctt ttccacatta atagcatcaa gcttccccaa 180
caaagccaaa gttgccaccg cacaaaaaga gaattctgtg tcaatttctc cctactttat 240
aaaagtagat ttttcacatc ccatgaagca g 271

<210> 338

<211> 326

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(326)

<223> n = A,T,C or G

<400> 338

ctgtgctccc gactngnnca tctcaggtac caccgactgc actgggcggg gccctctggg 60
gggaaaggct ccacggggca gggatacatc tcgaggccag tcatactctg gaggcagccc 120
aatcaggtca aagattttgc ccaactggtc ggcttcagag ttccacaga agagaggctt 180

tcgacgaaac atctctgcaa agatacagcc aacactccac atgtccacag gtgttgcata 240
tgtggactgc agaagaactt cgggagctcg gtaccagagt gtaacaacca cgggtgtaag 300
tgccatctgg tagctgtaga ttctgg 326

<210> 339

<211> 260

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(260)

<223> n = A,T,C or G

<400> 339

ttcacctgag gactcatttc gtgccctttg ttgacttcaa gcaaagncct tcanggtctn 60
caaggacgnc acatttccac ttgcgaatgn nctcanggt catcttgaag aanaagnanc 120
ccaagtgctg gatcccagac tcggggggtaa ccttgtgggt aagagctcat ccagtttatg 180
ctttaggacg tccanctact cggggggagct ggaagcctgc gtggatgcgg cctgctgga 240
cctcggccgc gaccacgcta 260

<210> 340

<211> 220

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(220)

<223> n = A,T,C or G

<400> 340

ctggaagccc ggctnggnet ggcagcggaa ggagccaggc aggttcacgc agcggtgctg 60
gcagtagcgg tagcggcact cgtctatgtc cacacactcg ggcccgatct tgcggtaacc 120
atcagggcag gtgcactgat aggagccagg caagttatgg cagtcctggc tggggcgaca 180
gtcgtgcagg gcctgggcac actcgtccac atccacacag 220

<210> 341

<211> 384

<212> DNA

<213> Homo sapiens

<400> 341

ctgctaccag gggagcgaga gctgactatc ccagcctcgg ctaatgtatt ctacgccatg 60
gatggagctt cacacgattt cctcctgcgg cagcggcgaa ggtcctctac tgctacaccg 120
ggcgtcacca gtggcccgtc tgccctcagg actcctccga gtgagggagg agggggctcc 180
tttcccagga tcaaggccac agggaggaag attgcacggg cactgttctg agggaggaagc 240
cccgttggt tacagaagtc atgggtgttca taccagatgt gggtagccat cctgaatggt 300
ggcaattata tcacattgag acagaaattc agaaagggag ccagccaccc tggggcagtg 360
aagtgccact ggtttaccag acag 384

<210> 342

<211> 245

<212> DNA

<213> Homo sapiens

<400> 342

```
ctggctaagc tcatcattgt tactgggtggg caccatgtcc ttgaagcttc aggcaagcaa 60
tgtaaccaac aagaatgacc ccaagtccat caactctcga gtcttcattg gaaacctcaa 120
cacagctctg gtgaagaaat cagatgtgga gaccatcttc tctaagtatg gccgtgtggc 180
cggctgttct gtgcacaagg gctatgcctt tgttcagtac tccaatgagc gccatgccc 240
ggcag                                         245
```

<210> 343

<211> 611

<212> DNA

<213> Homo sapiens

<400> 343

```
ccaaaaaaat caagatttaa tttttttatt tgcactgaaa aactaatcat aactgttaat 60
tctcagccat ctttgaagct tgaaagaaga gtctttggta ttttgtaaac gttagcagac 120
tttcctgcca gtgtcagaaa atcctattta tgaatcctgt cggatttcct tggatatctga 180
aaaaaatacc aaatagtacc atacatgagt tatttctaag ttgaaaaat aaaaagaaat 240
tgcacacac taattacaaa atacaagttc tggaaaaaat atttttcttc attttaaaac 300
tttttttaac taataatggc tttgaaagaa gaggttaat ttgggggtgg taactaaaat 360
caaaagaaat gattgacttg aggtctctctg tttgtaaga atacatcatt agcttaaata 420
agcagcagaa ggtagtttt aattatgtag ctctgtttaa tattaagtgt tttttgtctg 480
ttttacctca atttgaacag ataagtttgc ctgcatgctg gacatgcctc agaaccatga 540
atagcccgtg ctagatcttg ggaacatgga tcttagagtc ctttgaata agttcttata 600
taaatacccc c                                         611
```

<210> 344

<211> 311

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(311)

<223> n = A,T,C or G

<400> 344

```
nctcgaaaaa gcccaagaca gcagaagcag acacctccag tgaactagca aagaaaagca 60
aagaagtatt cagaaaagag atgtcccagt tcatcgcca gtgcctgaac cttaccgga 120
aacctgactg caaagtggga agaattacca caactgaaga ctttaaaccat ctggctcgca 180
agctgactca cgggtgttatg aataaggagc tgaagtactg taagaatcct gaggacctgg 240
agtgcaatga gaatgtgaaa cacaaaacca aggantacat taanaagtac atgcannan 300
tttggggcctt g                                         311
```

<210> 345

<211> 201

<212> DNA

<213> Homo sapiens

<400> 345

```
cacacggtca tcccgactgc caacctggag gcccagccc tgtggaagga gccgggcagc 60
aatgtcacca tgagtgtgga tgctgagtgt gtgccatgg tcagggacct tctcaggtag 120
ttctactccc gaaggattga catcaccctg tcgtcagtca agtgcttcca caagctggcc 180
tctgcctatg gggccaggca g                                         201
```

<210> 346
<211> 370
<212> DNA
<213> Homo sapiens

<400> 346
ctgctccagg gcggtggtgtg ccttcgtggc ctctgcctcc tccgaggagc caggctgtgt 60
tctcttcaga atgttctgga gcagcagttt gaggcgggtg atgcgttgga agggcagaat 120
cagaaaggac ttgagggaaa ggcgctggca gacggggtcg ctctccagct tctccaagac 180
ctcccggaaa ttgctgttgc tattcatcag gctctggaag gtgcgttcct gatagggtctg 240
gttggtgaca taaggcaggt agacccggcg gaagtctggg gcgtggttca ggactacgtc 300
acatacttgg aaggagaaga tattgttctc aaagtctctt tccagggtctg aaaggaacgt 360
ggcgctgacg 370

<210> 347
<211> 416
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(416)
<223> n = A,T,C or G

<400> 347
ctgttgtgct gtgtatggac gtgggcttta ccatgagtaa ctccattcct ggtatagaat 60
ccccatttga acaagcaaag aaggtgataa ccatgtttgt acagcgacag gtgtttgctg 120
agaacaagga tgagattgct ttagtctctgt ttggtacaga tggcactgac aatccccctt 180
ctggtgggga tcagtatcag aacatcacag tgcacagaca tctgatgcta ccagattttg 240
atttgctgga ggacattgaa agcaaaatcc aaccagggtc tcaacaggct gacttcctgg 300
atgcactaat cgtgagcatg gatgtgattc aacatgaaac aataggaaaag aagtttggag 360
aagaggcata ttgaaatatt cactgacctc aagcagcccg attcagcaaa agtcan 416

<210> 348
<211> 351
<212> DNA
<213> Homo sapiens

<400> 348
gtacaggaga ggatggcagg tgcagagcgg gcactgagct ctgcagggtga aagggctcgg 60
cagttggatg ctctcctgga ggctctgaaa ttgaaacggg caggaaatag tctggcagcc 120
tctacagcag aagaaacggc aggcagtgcc cagggacgag caggagacag atgccttcct 180
cttgtctcaa ctgcaaagag gcgttccttc ctctttcact aatcctcctc agcacagacc 240
ctttacgggt gtcaggctgg gggacagtaa ggtctttccc ttcccacaag gccatatctc 300
aggctgtctc agtgggggga aaccttggac aatacccggt ctttcttggg c 351

<210> 349
<211> 207
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(207)
<223> n = A,T,C or G

<400> 349

```

nccgggacat ctccaccctc aacagtggca agaagagcct ggagactgaa cacaaggcct 60
tgaccagtga gattgcactg ctgcagtcca ggctgaagac agagggctct gatctgtgcg 120
acagagtgag cgaaatgcag aagctggatg cacaggtcaa ggagctgggt ctgaagtcgg 180
cgggtggaggc tgagcgcctg gtggctg

```

207

<210> 350

<211> 323

<212> DNA

<213> Homo sapiens

<400> 350

```

ccatacaggg ctgttgccca ggccctagag gtcattcctc gtaccctgat ccagaactgt 60
ggggccagca ccatccgtct acttacctcc cttcggggcca agcacacca ggagaactgt 120
gagacctggg gtgtaaatgg tgagacgggt actttgtgtg acatgaagga actgggcata 180
tgggagccat tggctgtgaa gctgcagact tataagacag cagtggagac ggcagttctg 240
ctactgcgaa ttgatgacat cgtttcaggc cacgaaaaga aaggcgatga ccagagccgg 300
caaggcgggg ctctgatgc tgg

```

323

<210> 351

<211> 353

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(353)

<223> n = A,T,C or G

<400> 351

```

cgccgcaccc cntggtcctt tccantccct tttcctttnt cngggaaact gtatgcgggt 60
tgtttttgtt ttgtagggtt tttttccttc tccacctctc cctgtctctt ttgctccatg 120
ttgtccggtt ctgtgggggt aggtttatgt ttttaacat ctgaggtcac gtctatttcc 180
tccggactcg cctgcttggg ggcgattctc caccgggtaa tatggtgcgt ccttttttcc 240
ttttgttgcg aatctgagcc ttcttctccc agcttctgcc ttttgaactt tgttcttcgg 300
ttctgaaacc atacttttac ctgagtttcc gtgaggctga ggctgtgtgc caa

```

353

<210> 352

<211> 467

<212> DNA

<213> Homo sapiens

<400> 352

```

ctgcccacac tgatcacttg cgagatgtcc ttaggggtaca agaacaggaa ttgaagtctg 60
aatttgagca gaacctgtct gagaaactct ctgaacaaga attacaattt cgctcgtctca 120
gtcaagagca agttgacaac ttactcttgg atataaatac tgcctatgcc agactcagag 180
gaatcgaaca ggctgttcag agccatgcag ttgctgaaga ggaagccaga aaagcccacc 240
aactctgggt ttcagtggag gcattaaagt acagcatgaa gacctcatct gcagaaacac 300
ctactatccc gctgggtagt gcagttgagg ccatcaaagc caactgttct gataatgaat 360
tcacccaagc tttaaccgca gctatccctc cagagtcctt gaccctggg gtgtacagtg 420
aagagaccct tagagcccgt ttctatgctg ttcaaaaact ggcccga

```

467

<210> 353

<211> 350

<212> DNA

<213> Homo sapiens

<400> 353

```
ctgctgcagc cacagtagtt cctcccatgg tgggtggccc tcttggtcct gctggcccag 60
gaaatctgtc cccaccagga acagcccctg gaaaacggcc ccgtcctcta ccaccttggtg 120
gaaatgctgc acgggaactg cctcctggag gaccagcttt accttcccca gacatttgctc 180
ctgattgtgt agttttcctg gactgcattt caaattgact caggaaactgt ttattgcatg 240
gagttacaac aggattctga ccatgaagtt ctcttttagg taacagatcc attaactttt 300
ttgaagatgc ttcagatcca acaccaacaa gggcaaacc ctttgactgg 350
```

<210> 354

<211> 351

<212> DNA

<213> Homo sapiens

<400> 354

```
atthagatga gatctgaggg atggagacat ggagacagta tacagactcc tagatttaag 60
ttttagggtt tttgcttttc taatcaccaa ttcttatata caatgtatat tttagactcg 120
agcagatgat catcttcac ttaagtcatt ccttttgact gagtatggca ggattagagg 180
gaatggcagt atagatcaat gtctttttct gtaaagtata ggaaaaacca gagaggaaaa 240
aaagagctga caattggaag gtagtagaaa attgacgata atttcttctt aacaaataat 300
agttgtatat acaaggaggc tagtcaacca gattttattt gttgagggcg a 351
```

<210> 355

<211> 308

<212> DNA

<213> Homo sapiens

<400> 355

```
ttttggcgca agttttacag attttattaa agtcgaagct attggtcttg gaagatgaaa 60
atgcaaagt t gatgaggtg gaattgaagc cagatacctt aataaaatta tatcttggtt 120
ataaaaaata gaaattaagg gttaacatca atgtgccaat gaaaaccgaa cagaagcagg 180
aacaagaaac cacacacaaa aacatcgagg aagaccgcaa actactgatt caggcggcca 240
tcgtgagaat catgaagatg aggaagggtc tgaaacacca gcagttactt ggcgaggtcc 300
tcactcag 308
```

<210> 356

<211> 207

<212> DNA

<213> Homo sapiens

<400> 356

```
ctgtcccaag tgctcccaga aggcaggatt ctgaagacca ctccagcgat atgttcaact 60
atgaagaata ctgcaccgcc aacgcagtca ctgggccttg ccgtgcatcc ttcccacgct 120
ggtactttga cgtggagagg aactcctgca ataacttcat ctatggaggc tgccggggca 180
ataagaacag ctaccgctct gaggagg 207
```

<210> 357

<211> 188

<212> DNA

<213> Homo sapiens

<220>

<221> .misc_feature

<222> (1)...(188)

<223> n = A,T,C or G

<400> 357

```
tcgaccacgc cctcgtagcg catgngctnc aggacgatgc tcagagtgat gaacacccccg 60
gtgcggccca cgccagcact gcagtgcacc gtgataggcc catcctgtcc aaactgctcc 120
ttggtcttat gcacctgccc gatgaagtca atgaatccct cgctgtctt gggcacgccc 180
tgctctgg                                     188
```

<210> 358

<211> 291

<212> DNA

<213> Homo sapiens

<400> 358

```
ctgggagcat cggcaagcta ctgccttaaa atccgatctc cccgagtgca caatttctgt 60
cccttttaag ggttcacaac actaaagatt tcacatgaaa gggtttgat tgatttgagc 120
aggcaggcgg tacgtgacag gggctgcatg caccggtggt cagagagaaa cagaacaggg 180
caggggaattt cacaatgttc ttctatacaa tggctggaat ctatgaataa catcagtttc 240
taagttatgg gttgattttt aactactggg tttaggccag gcaggcccag g 291
```

<210> 359

<211> 117

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(117)

<223> n = A,T,C or G

<400> 359

```
gccaccacac tccagcctgg gcaatacagc aagactgtct caaaaaaaaaa aaaaaaaaaa 60
cccaaaaaaa ctcaaaaang taatgaatga tacccaangn gccttttcta gaaaaag 117
```

<210> 360

<211> 394

<212> DNA

<213> Homo sapiens

<400> 360

```
ctgttcctct ggggtggtcc agttctagag tgggagaaa gtagtcaggc gcattgggaa 60
tcgtggttcc agtctggttg cagaatctgc acatttgcca agaaattttc cctgtttgga 120
aagtttgccc cagctttccc gggcacacca ctttttgccc caagtgtctg ccggtcgacc 180
aatctgcctg ccacacattg accaagccag acccggttca cccagctcga ggatcccagg 240
ttgaagagtg gcccttgag gccctggaaa gaccaatcac tggacttctt cccttgagag 300
tcagaggtea cccgtgatcc tgccctgcacc ttatcattga tctgcagtga tttctgcaaa 360
tcaagagaaa ctctgcaggg cactcccctg tttc                                     394
```

<210> 361

<211> 394

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature
<222> (1)...(394)
<223> n = A,T,C or G

<400> 361

```
ctgggcggat agcaccgggc atattttntt natggatgag gtctggcacc ctgagcagtc 60
cagcgaggac ttggtcttag ttgagcaatt tggctaggag gatagtatgc agcacggttc 120
tgagtctgtg ggatagctgc catgaagtaa cctgaaggag gtgctggctg gtaggggttg 180
attacagggt tgggaacagc tcgtacactt gccattctct gcatatactg gttagtggag 240
tgagcctggc gctcttcttt gcgctgagct aaagctacat acaatggctt tgtggacctc 300
ggccgcgacc acgctaagcc gaattccagc aactggcggt ccgttactag tggatccgag 360
ctcggtagca agcttggcgt aatcatggtc atag 394
```

<210> 362
<211> 268
<212> DNA
<213> Homo sapiens

<400> 362

```
ctgcgcgtgg accagtcagc ttccgggtgt gactggagca gggcttgctg tcttcttcag 60
agtcactttg caggggttggt tgaagctgct cccatccatg tacagctccc agtctactga 120
tgtttaagga tgggtctcgggt ggtagggccc actagaataa actgagtcca atacctctac 180
acagttatgt ttaactgggc tctctgacac cgggaggaag gtggcggggt ttaggtgttg 240
caaacttcaa tggttatgcg gggatggt 268
```

<210> 363
<211> 323
<212> DNA
<213> Homo sapiens

<400> 363

```
ccttgacctt ttcagcaagt gggaagggtgt aatccgtctc cacagacaag gccaggactc 60
gtttgtaccc gttgatgata gaatggggta ctgatgcaac agttgggtag ccaatctgca 120
gacagacact ggcaacattg cggacaccct ccaggaagcg agaatgcaga gtttcctctg 180
tgatatcaag cacttcagggt ttgtagatgc tgccattgtc gaacacctgc tggatgacca 240
gcccaaagga gaagggggag atgttgagca tgttcagcag cgtggcttcg ctggctccca 300
ctttgtctcc agtcttgatc aga 323
```

<210> 364
<211> 393
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> (1)...(393)
<223> n = A,T,C or G

<400> 364

```
ccaagctctc catcgctccc gtgcgcagng gctactgggg gaacaagatc ggcaagcccc 60
aactgtcccc ttgcaagggt acaggccgct gcggctctgt gctggtagcg ctcatcactg 120
caccagggg cactggcacc gtctccgcac ctgtgcctaa gaagctgctc atgatggctg 180
gcatcgatga ctgctacacc tcagccccgg gctgcactgc caccctgggc aacttcgcca 240
aggccacctt tgatgccatt tctaagacct acagctacct gacccccgac ctctggaagg 300
agactgtatt caccaagtct ccctatcagg agttcactga ccacctcgtc aagaccacca 360
```


ccagagtctc cgtgcagcgg actcaggctc cag

393

<210> 365

<211> 371

<212> DNA

<213> Homo sapiens

<400> 365

cctcctcaga gcggtagctg ttcttattgc cccggcagcc tccatagatg aagttattgc 60
aggagttcct ctccacgtca aagtaccagc gtgggaagga tgcacggcaa ggcccagtga 120
ctgcgttggc ggtgcagtat tcttcatagt tgaacatata gctggagtgg tcttcagaat 180
cctgccttct gggagcactt gggacagagg aatccgctgc attcctgctg gtggacctcg 240
gccgcgacca cgctaagccg aattccagca cactggcggc cgttactagt ggatccgagc 300
tcggtaccaa gcttggcgta atcatggtca tagctgtttc ctgtgtgaaa ttgttatccg 360
ctcacaaattc c 371

<210> 366

<211> 393

<212> DNA

<213> Homo sapiens

<400> 366

atttcttgcc agatgggagc tctttggtga agactccttt cgggaaaagt tttttggctt 60
cttcttcagg gatggttgga aggaccatca cactatcccc atccttccaa tcaactgggg 120
tggaaccctt tttttctgct gtcagctgga gagagatgac taccctgaga atctcatcaa 180
agtctctgcc agtggtagct gggtagagga tagacagctt cagcttctta tcaggaccaa 240
aaacaaacac cacacgagct gccacaggca tgcccttttc atccttctct gctggatcca 300
gcatgcccaa caggatggca agctcccgat tcctatcctc gatgatggga aaaggtaact 360
tttctgtggg ctcttcacaa ttgtaagcat tga 393

<210> 367

<211> 327

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(327)

<223> n = A,T,C or G

<400> 367

ccagctctgt ctcatatttg actctaaagt cttnagcagc aagacgggca ttgnnaatct 60
gcagaacgat gcgggcattg tccacagtat ttgcgaagat ctgagccctc aggtcctcga 120
tgatcttgaa gtaatggctc cagtctctga cctgggggtcc cttcttctcc aagtgtctcc 180
ggattttgct ctccagcctc cggttctcgg tctccaggct cctcactctg tccaggtaag 240
aggccaggcg gtcgttcagg ctttgcatgg tctccttctc gttctggatg cctcccatcc 300
ctgccagacc cccggctatc ccggtgg 327

<210> 368

<211> 306

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(306)

<223> n = A,T,C or G

<400> 368

```
ctggagaagg acttcagcag tttnaagaag tactgccaaag tcatccgtgt cattgcccac 60
accagatgc gcctgcttcc tctgcgccag aagaaggccc acctgatgga gatccagggtg 120
aacggaggca ctgtggccga gaagctggac tgggcccgcg agaggcttga gcagcaggta 180
cctgtgaacc aagtgtttgg gcaggatgag atgatcgacg tcatcggggt gaccaagggc 240
aaaggctaca aaggggtcac cagtcgttgg cacaccaaga agctgccccg caagaccac 300
cgagga 306
```

<210> 369

<211> 394

<212> DNA

<213> Homo sapiens

<400> 369

```
tgcaccaca ccggaacacg gagagctggg ccagcattgg cacttgatag gatttcccgt 60
cggctgccac gaaagtgcgt ttctttgtgt tctcgggttg gaaccgtgat ttccacagac 120
ccttgaaata cactgcgttg acgaggacca gtctgggtgag cacaccatca ataagatctg 180
gggacagcag attgtcaatc atatccctgg ttctattttt aacccatgca ttgatggaat 240
cacaggcaga ggctggatcc tcaaagttca cattccggac ctacactgg aacacatctt 300
tgttccttgt aacaaaaggc acttcaattt cagaggcatt ctttaacaaac acggcgttag 360
ccactgtcac aatgtcttta ttcttcttgg agac 394
```

<210> 370

<211> 653

<212> DNA

<213> Homo sapiens

<400> 370

```
ccaccacacc caattccttg ctggtatcat ggcagccgcc acgtgccagg attaccggct 60
acatcatcaa gtatgagaag cctgggtctc ctcccagaga agtgggtccct cggccccgcc 120
ctggtgtcac agaggctact attactggcc tggaaaccggg aaccgaatat acaatttatg 180
tcattgccct gaagaataat cagaagagcg agcccctgat tggaaaggaaa aagacagacg 240
agcttcccca actggttaacc cttccacacc ccaatcttca tggaccagag atcttggatg 300
ttccttccac agttcaaaaag acccctttcg taccacacc tgggtatgac actggaaatg 360
gtattcagct tcctggcact tctggtcagc aaccagtggt tgggcaacaa atgatctttg 420
aggaacatgg ttttaggcgg accacaccgc ccacaacggc ccccccata aggcataaggc 480
caagaccata cccgccgaat gtaggacaag aagctctctc tcagacaacc atctcatggg 540
ccccattcca ggacacttct gagtacatca ttctatgtca tcctgttggc actgatgaag 600
aacccttaca gttcaggggt cctggaactt ctaccagtgc cactctgaca gga 653
```

<210> 371

<211> 268

<212> DNA

<213> Homo sapiens

<400> 371

```
ctgcccagcc cccattggcg agtttgagaa ggtgtgcagc aatgacaaca agaccttcga 60
ctcttctctg cacttctttg ccacaaagtg caccctggag ggcaccaaga agggccacaa 120
gctccacctg gactacatcg ggccttgcaa atacatccc ccttgccctgg actctgagct 180
gaccgaattc cccctgcgca tgcgggactg gctcaagaac gtccctgggtca ccctgtatga 240
gagggatgag gacaacaacc ttctgact 268
```

<210> 372
<211> 392
<212> DNA
<213> Homo sapiens

<400> 372
gctggtgccc ctggtgaacg tggacctcct ggattggcag gggccccagg acttagaggt 60
ggaactggtc cccctggtcc cgaaggagga aagggtgctg ctggtcctcc tgggccacct 120
ggtgctgctg gtactcctgg tctgcaagga atgcctggag aaagaggagg tcttggaagt 180
cctggtccaa agggtgacaa ggggtaacca ggcggtccag gtgctgatgg tgtcccagg 240
aaagatggcc caaggggtcc tactggtcct attggtcctc ctggcccagc tggccagcct 300
ggagataagg gtgaagggtg tgcctccgga cttccaggta tagctggacc tcgtggtagc 360
cctggtgaga gaggtgaaac ctgcggccgcg ac 392

<210> 373
<211> 388
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(388)
<223> n = A,T,C or G

<400> 373
ccaagcgctc agatcggcaa ggggcaccan ttttgatctg cccagtgcac agccccacaa 60
ccaggtcagc gatgaaggta tcttcagtct ccccgaaacg atgagacacc atgacgcccc 120
aaccattggc ctgggccagc ttgcacgcct gaagagactc ggtcacggag ccaatctggt 180
tgactttgag caggaggcag ttgcaggact tctcgttcac ggccttggcg atcctctttg 240
ggttgggtcac tgtgagatca tccccacta cctggattcc tgcaactggt gtgaacttct 300
gccaaagctc ccagtcaccc tgggtcaaagg gatcttcgat agacaccact gggtagtcct 360
tgatgaagga cttgtacagg tcagccag 388

<210> 374
<211> 393
<212> DNA
<213> Homo sapiens

<400> 374
ctgacgaccg cgtgaacccc tgcattgggg gtgtcactct cttccatgag acactctacc 60
agaaggcgga tgatgggcgt ccttcccccc aagttatcaa atccaagggc ggtggttggtg 120
gcatcaagggt agacaagggc gtggtcccc tggcagggac aaatggcgag actaccaccc 180
aagggttgga tgggctgtct gagcgctgtg cccagtacaa gaaggacgga gctgacttcg 240
ccaagtggcg ttgtgtgctg aagattgggg aacacacccc ctcagccctc gccatcatgg 300
aaaatgccaa tgttctggcc cgttatgccg gtatctgccg gcagaatggc attgtgcccc 360
tcgtggagcc tgagatcctc cctgatgggg acc 393

<210> 375
<211> 394
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(394)

<223> n = A,T,C or G

<400> 375

```
ccacaaatgg cgtgggtccat gtcataccn ttnttctgca gcctccagcc aacagacctc 60
aggaaagagg ggatgaactt gcagactctg cgcttgagat cttcaaaca gcatcagcgt 120
tttccagggc ttcccagagg tctgtgagac tagccctgt ctatcaaaag ttattagaga 180
ggatgaagca ttagcttgaa gcactacagg aggaatgcac cacggcagct ctccgccaat 240
ttctctcaga ttccacaga gactgtttga atgttttcaa aaccaagtat cacacttta 300
tgtacatggg ccgcaccata atgagatgtg agccttgtgc atgtggggga ggaggagag 360
agatgtactt tttaaactcat gttcccccta aaca 394
```

<210> 376

<211> 392

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(392)

<223> n = A,T,C or G

<400> 376

```
ctgcccagcc cccattggcg agtttgattn ggtgtgcagc aatgacaaca agaccttcga 60
ctcttctctg cacttctttg ccacaaagtg caccctggag ggaccaaga agggccacaa 120
gctccacctg gactacatcg ggcttgcaa atacatcccc ccttgccctg actctgagct 180
gaccgaattc cccctgcgca tgcgggactg gctcaagaac gtcctggtea ccctgtatga 240
gagggatgag gacaacaacc ttctgactga gaagcagaag ctgcggtgga agaagatcca 300
tgagaatgag aagcgctctg aggcaggaga ccacccctg gagctgctgg cccgggactt 360
cgagaagaac tataacatgt acatcttccc tg 392
```

<210> 377

<211> 292

<212> DNA

<213> Homo sapiens

<400> 377

```
caatgtttga tgcttaaccc ccccaatttc tgtgagatgg atggccagtg caagcgtgac 60
ttgaagtgtt gcatgggcat gtgtgggaaa tcttgcgttt cccctgtgaa agcttgattc 120
ctgccatag gaggaggctc tggagtcctg ctctgtgtgg tccaggctct ttccaccctg 180
agacttggct ccaccactga tatcctcctt tggggaaaagg cttggcacac agcaggcttt 240
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<210> 378

<211> 395

<212> DNA

<213> Homo sapiens

<400> 378

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agcagtatca atgtctctgc tgattgcact ggtctgaaac tccctttgga ttagctgaga 180
cacaccattc tgggcccctga ttttcctaag atagaactcc aactctttgc cctctagcac 240
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ctgctggaac tgctcctcca ggagactgct gattttggca ttctttttcc tttcatcata 360
tttcttctga attttttaga tcgttttttt tttaa 395
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<210> 379
<211> 223
<212> DNA
<213> Homo sapiens

<400> 379
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tggttccagc ccacctgccc tccccttttt cgggactctg tattccctct tgggctgacc 180
acagcttctc cctttcccaa ccaataaagt aaccactttc agc 223

<210> 380
<211> 317
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(317)
<223> n = A,T,C or G

<400> 380
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gggtgcagga gaacaaggta gaccagtga gcagaatatg tatcggggat atagaccacg 120
attccgcagg ggccctcctc gccaaagaca gcctagagag gacggcaatg aagaagataa 180
agaaaatcaa ggagatgaga cccaaggta gcagccacct caacgtcgt accgccgcaa 240
cttcaattac cgacgcagac gcccaaaaa ccctaaacca caagatggca aagagacaaa 300
agcagccgat ccaccag 317

<210> 381
<211> 392
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)...(392)
<223> n = A,T,C or G

<400> 381
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caagatcctg agtgacatgc gaagccaata tgaggtcatg gccgagcaga accggaagga 180
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ggagcagctc cagatgagca ggtccgaggt tactgacctg cggcgacccc ttcagggctc 300
tgagattgag ctgcagtcac agacctcggc cgcgaccacg ctaagccgaa ttccagcaca 360
ctggcgggccg ttactagtgg atccgagctc gg 392

<210> 382
<211> 234
<212> DNA
<213> Homo sapiens

<400> 382

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ccgcgacttc gttcaggtac atgaagagct ccaaggagggt ctgggtgggtg gtgccatcct 180
tgacgttggt caccttcaca gggacccctt ttttgaactc catctccaga atgt 234
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<210> 383

<211> 396

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(396)

<223> n = A,T,C or G

<400> 383

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gacagacact ggcaacattg cggacaccca ggatttcaat ggtgcccctg gagatttttag 180
tggtgatacc taaagcctgg aaaaaggagg tcttctcggg cccgagacca gtgttctggg 240
ctggcacagt gacttcacat ggggcaatgg caccagcacg ggcagcagac ctgcccgggc 300
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<210> 384

<211> 396

<212> DNA

<213> Homo sapiens

<400> 384

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<210> 385

<211> 2943

<212> DNA

<213> Homo sapiens

<400> 385

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gccatctgca cccaccacc tgaccccaaa agccctaggc tggacagaga gcagctgtat 540
tgggagctga gccagctgac ccacaatatc actgagctgg gccctatgc cctggacaac 600
gacagcctct ttgtcaatgg tttcactcat cggagctctg tgtccaccac cagcactcct 660
```

```

gggacccccca cagtgtatct gggagcatct aagactccag cctcgatatt tggcccttca 720
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```

<210> 386

<211> 2608

<212> DNA

<213> Homo sapiens

<400> 386

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aagccctagg ctggacagag agcagctgta ttgggagctg agccagctga ccacaatat 180
cactgagctg ggccctatg cctggacaa cgacagcctc tttgtcaatg gtttactca 240
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2608

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<210> 387

<211> 1761

<212> DNA

<213> Homo sapiens

<400> 387

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```

acccacatc ctcagagtac atcacctgc tgagggacat ccaggacaag gtcaccacac 840
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```

<210> 388

<211> 772

<212> PRT

<213> Homo sapiens

<400> 388

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      20                      25                      30

Asn Leu Val Pro Arg Leu Pro Ala Leu Ser Trp Cys Tyr Ser Leu Ser
      35                      40                      45

Thr Ser Pro Ser Pro Thr Cys Gly Met Arg Arg Thr Cys Ser Thr Leu
      50                      55                      60

Ala Pro Gly Ser Ser Thr Pro Arg Arg Gly Ser Phe Arg Ala Trp Ser
      65                      70                      75                      80

Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu
      85                      90                      95

Thr Leu Leu Arg Pro Glu Lys Asp Gly Thr Ala Thr Gly Val Asp Ala
      100                     105                     110

Ile Cys Thr His His Pro Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu
      115                     120                     125

Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu
      130                     135                     140

Gly Pro Tyr Ala Leu Asp Asn Asp Ser Leu Phe Val Asn Gly Phe Thr
      145                     150                     155                     160

His Arg Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Pro Thr Val

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Tyr Leu Gly Ala Ser Lys Thr Pro Ala Ser Ile Phe Gly Pro Ser Ala		
180	185	190
Ala Ser His Leu Leu Ile Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn		
195	200	205
Leu Arg Tyr Glu Glu Asn Met Trp Pro Gly Ser Arg Lys Phe Asn Thr		
210	215	220
Thr Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr		
225	230	235
Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro		
245	250	255
Glu Lys Asp Gly Glu Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg		
260	265	270
Pro Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Gln Leu Tyr Leu Glu		
275	280	285
Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu		
290	295	300
Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val		
305	310	315
Pro Thr Thr Ser Thr Gly Val Val Ser Glu Glu Pro Phe Thr Leu Asn		
325	330	335
Phe Thr Ile Asn Asn Leu Arg Tyr Met Ala Asp Met Gly Gln Pro Gly		
340	345	350
Ser Leu Lys Phe Asn Ile Thr Asp Asn Val Met Lys His Leu Leu Ser		
355	360	365
Pro Leu Phe Gln Arg Ser Ser Leu Gly Ala Arg Tyr Thr Gly Cys Arg		
370	375	380
Val Ile Ala Leu Arg Ser Val Lys Asn Gly Ala Glu Thr Arg Val Asp		
385	390	395
Leu Leu Cys Thr Tyr Leu Gln Pro Leu Ser Gly Pro Gly Leu Pro Ile		
405	410	415
Lys Gln Val Phe His Glu Leu Ser Gln Gln Thr His Gly Ile Thr Arg		
420	425	430
Leu Gly Pro Tyr Ser Leu Asp Lys Asp Ser Leu Tyr Leu Asn Gly Tyr		
435	440	445
Asn Glu Pro Gly Pro Asp Glu Pro Pro Thr Thr Pro Lys Pro Ala Thr		
450	455	460

Thr Phe Leu Pro Pro Leu Ser Glu Ala Thr Thr Ala Met Gly Tyr His
 465 470 475 480
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 485 490 495
 Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser Thr Glu Gly Val
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 Phe Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg Pro Glu Lys Asp Gly
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 545 550 555 560
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 610 615 620
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 625 630 635 640
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 690 695 700
 Gln Leu Val Asp Ile His Val Thr Glu Met Glu Ser Ser Val Tyr Gln
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 Pro Thr Ser Ser Ser Ser Thr Gln His Phe Tyr Leu Asn Phe Thr Ile
 725 730 735
 Thr Asn Leu Pro Tyr Ser Gln Asp Lys Ala Gln Pro Gly Thr Thr Asn
 740 745 750

Tyr Gln Arg Asn Lys Arg Asn Ile Glu Asp Ala Ala Pro His Arg Gly
 755 760 765

Gly Leu Pro Val
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<210> 389

<211> 833

<212> PRT

<213> Homo sapiens

<400> 389

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Cys Thr His His Pro Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu Gln
 35 40 45

Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly
 50 55 60

Pro Tyr Ala Leu Asp Asn Asp Ser Leu Phe Val Asn Gly Phe Thr His
 65 70 75 80

Arg Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Pro Thr Val Tyr
 85 90 95

Leu Gly Ala Ser Lys Thr Pro Ala Ser Ile Phe Gly Pro Ser Ala Ala
 100 105 110

Ser His Leu Leu Ile Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu
 115 120 125

Arg Tyr Glu Glu Asn Met Trp Pro Gly Ser Arg Lys Phe Asn Thr Thr
 130 135 140

Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr Ser
 145 150 155 160

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
 165 170 175

Lys Asp Gly Glu Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Pro
 180 185 190

Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Gln Leu Tyr Leu Glu Leu
 195 200 205

Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
 210 215 220

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro
 225 230 235 240
 Thr Thr Ser Thr Gly Val Val Ser Glu Glu Pro Phe Thr Leu Asn Phe
 245 250 255
 Thr Ile Asn Asn Leu Arg Tyr Met Ala Asp Met Gly Gln Pro Gly Ser
 260 265 270
 Leu Lys Phe Asn Ile Thr Asp Asn Val Met Lys His Leu Leu Ser Pro
 275 280 285
 Leu Phe Gln Arg Ser Ser Leu Gly Ala Arg Tyr Thr Gly Cys Arg Val
 290 295 300
 Ile Ala Leu Arg Ser Val Lys Asn Gly Ala Glu Thr Arg Val Asp Leu
 305 310 315 320
 Leu Cys Thr Tyr Leu Gln Pro Leu Ser Gly Pro Gly Leu Pro Ile Lys
 325 330 335
 Gln Val Phe His Glu Leu Ser Gln Gln Thr His Gly Ile Thr Arg Leu
 340 345 350
 Gly Pro Tyr Ser Leu Asp Lys Asp Ser Leu Tyr Leu Asn Gly Tyr Asn
 355 360 365
 Glu Pro Gly Pro Asp Glu Pro Pro Thr Thr Pro Lys Pro Ala Thr Thr
 370 375 380
 Phe Leu Pro Pro Leu Ser Glu Ala Thr Thr Ala Met Gly Tyr His Leu
 385 390 395 400
 Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser Asn Leu Gln Tyr Ser Pro
 405 410 415
 Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser Thr Glu Gly Val Leu
 420 425 430
 Gln His Leu Leu Arg Pro Leu Phe Gln Lys Ser Ser Met Gly Pro Phe
 435 440 445
 Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg Pro Glu Lys Asp Gly Ala
 450 455 460
 Ala Thr Gly Val Asp Thr Thr Cys Thr Tyr His Pro Asp Pro Val Gly
 465 470 475 480
 Pro Gly Leu Asp Ile Gln Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
 485 490 495
 His Gly Val Thr Gln Leu Gly Phe Tyr Val Leu Asp Arg Asp Ser Leu
 500 505 510
 Phe Ile Asn Gly Tyr Ala Pro Gln Asn Leu Ser Ile Arg Gly Glu Tyr

515	520	525
Gln Ile Asn Phe His Ile Val Asn Trp Asn Leu Ser Asn Pro Asp Pro		
530	535	540
Thr Ser Ser Glu Tyr Ile Thr Leu Leu Arg Asp Ile Gln Asp Lys Val		
545	550	555
Thr Thr Leu Tyr Lys Gly Ser Gln Leu His Asp Thr Phe Arg Phe Cys		
	565	570
Leu Val Thr Asn Leu Thr Met Asp Ser Val Leu Val Thr Val Lys Ala		
	580	585
Leu Phe Ser Ser Asn Leu Asp Pro Ser Leu Val Glu Gln Val Phe Leu		
	595	600
Asp Lys Thr Leu Asn Ala Ser Phe His Trp Leu Gly Ser Thr Tyr Gln		
	610	615
Leu Val Asp Ile His Val Thr Glu Met Glu Ser Ser Val Tyr Gln Pro		
	625	630
Thr Ser Ser Ser Ser Thr Gln His Phe Tyr Leu Asn Phe Thr Ile Thr		
	645	650
Asn Leu Pro Tyr Ser Gln Asp Lys Ala Gln Pro Gly Thr Thr Asn Tyr		
	660	665
Gln Arg Asn Lys Arg Asn Ile Glu Asp Ala Leu Asn Gln Leu Phe Arg		
	675	680
Asn Ser Ser Ile Lys Ser Tyr Phe Ser Asp Cys Gln Val Ser Thr Phe		
	690	695
Arg Ser Val Pro Asn Arg His His Thr Gly Val Asp Ser Leu Cys Asn		
	705	710
Phe Ser Pro Leu Ala Arg Arg Val Asp Arg Val Ala Ile Tyr Glu Glu		
	725	730
Phe Leu Arg Met Thr Arg Asn Gly Thr Gln Leu Gln Asn Phe Thr Leu		
	740	745
Asp Arg Ser Ser Val Leu Val Asp Gly Tyr Phe Pro Asn Arg Asn Glu		
	755	760
Pro Leu Thr Gly Asn Ser Asp Leu Pro Phe Trp Ala Val Ile Leu Ile		
	770	775
Gly Leu Ala Gly Leu Leu Gly Leu Ile Thr Cys Leu Ile Cys Gly Val		
	785	790
Leu Val Thr Thr Arg Arg Arg Lys Lys Glu Gly Glu Tyr Asn Val Gln		
	805	810
		815

Gln Gln Cys Pro Gly Tyr Tyr Gln Ser His Leu Asp Leu Glu Asp Leu
 820 825 830

Gln

<210> 390

<211> 438

<212> PRT

<213> Homo sapiens

<400> 390

Met Gly Tyr His Leu Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser Asn
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Leu Gln Tyr Ser Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser
 20 25 30

Thr Glu Gly Val Leu Gln His Leu Leu Arg Pro Leu Phe Gln Lys Ser
 35 40 45

Ser Met Gly Pro Phe Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg Pro
 50 55 60

Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Thr Thr Cys Thr Tyr His
 65 70 75 80

Pro Asp Pro Val Gly Pro Gly Leu Asp Ile Gln Gln Leu Tyr Trp Glu
 85 90 95

Leu Ser Gln Leu Thr His Gly Val Thr Gln Leu Gly Phe Tyr Val Leu
 100 105 110

Asp Arg Asp Ser Leu Phe Ile Asn Gly Tyr Ala Pro Gln Asn Leu Ser
 115 120 125

Ile Arg Gly Glu Tyr Gln Ile Asn Phe His Ile Val Asn Trp Asn Leu
 130 135 140

Ser Asn Pro Asp Pro Thr Ser Ser Glu Tyr Ile Thr Leu Leu Arg Asp
 145 150 155 160

Ile Gln Asp Lys Val Thr Thr Leu Tyr Lys Gly Ser Gln Leu His Asp
 165 170 175

Thr Phe Arg Phe Cys Leu Val Thr Asn Leu Thr Met Asp Ser Val Leu
 180 185 190

Val Thr Val Lys Ala Leu Phe Ser Ser Asn Leu Asp Pro Ser Leu Val
 195 200 205

Glu Gln Val Phe Leu Asp Lys Thr Leu Asn Ala Ser Phe His Trp Leu
 210 215 220

Gly Ser Thr Tyr Gln Leu Val Asp Ile His Val Thr Glu Met Glu Ser
 225 230 235 240
 Ser Val Tyr Gln Pro Thr Ser Ser Ser Ser Thr Gln His Phe Tyr Leu
 245 250 255
 Asn Phe Thr Ile Thr Asn Leu Pro Tyr Ser Gln Asp Lys Ala Gln Pro
 260 265 270
 Gly Thr Thr Asn Tyr Gln Arg Asn Lys Arg Asn Ile Glu Asp Ala Leu
 275 280 285
 Asn Gln Leu Phe Arg Asn Ser Ser Ile Lys Ser Tyr Phe Ser Asp Cys
 290 295 300
 Gln Val Ser Thr Phe Arg Ser Val Pro Asn Arg His His Thr Gly Val
 305 310 315 320
 Asp Ser Leu Cys Asn Phe Ser Pro Leu Ala Arg Arg Val Asp Arg Val
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 Ala Ile Tyr Glu Glu Phe Leu Arg Met Thr Arg Asn Gly Thr Gln Leu
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 Pro Asn Arg Asn Glu Pro Leu Thr Gly Asn Ser Asp Leu Pro Phe Trp
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 Leu Ile Cys Gly Val Leu Val Thr Thr Arg Arg Arg Lys Lys Glu Gly
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 Asp Leu Glu Asp Leu Gln
 435

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 <211> 2627
 <212> DNA
 <213> Homo sapiens

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 tagcatcatc attattcttg ctggagcaat tgcactcatc attggctttg gtatttcagg 180
 gagacactcc atcacagtca ctactgtcgc ctcagctggg aacattgggg aggatggaat 240
 cctgagctgc acttttgaac ctgacatcaa actttctgat atcgtgatac aatggctgaa 300
 ggaaggtgtt ttaggcttgg tccatgagtt caaagaaggc aaagatgagc tgctcggagca 360


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cacttctaaa ggcaaggagg atgctaacct tgagtataaa actggagcct tcagcatgcc 540
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gctgtaatgt tgctctgagg aagcccctgg aaagtctatc ccaacatatc cacatcttat 1380
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aactcagggg cggtgcatt ttagtaattg gtcaaatgat tcacttttta tgatgcttcc 1500
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gaaggacctt tcaccttgac tatatggcat tatgtcatca caagctctga ggcttctctt 1740
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tgctgtcaa cctcctacca tgtacaggac gtctcccat tacaactacc caatccgaag 1980
tgtcaactgt gtcaggacta agaaacctg gttttgagta gaaaagggcc tggaaagagg 2040
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gagcttctaa gtttctttcc ctctattcta ccctgcaagc caagtctgtt aagagaaatg 2280
cctgagttct agctcaggtt ttcttactct gaatttagat ctccagacct ttctggcca 2340
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ggagccacgg tgactgtatt acatgttgtt atagaaaact gattttagag ttctgatcgt 2580
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<210> 392

<211> 310

<212> PRT

<213> Homo sapiens

<400> 392

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His Ala Ser Ala His Ala Ser Gly Arg Gln Arg Gln Leu His Ser Ala
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Ser Thr Gln Ile Arg Trp Glu Pro Ser Pro Ala Met Ala Ser Leu Gly
          20                      25                      30

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Gln Ile Leu Phe Trp Ser Ile Ile Ser Ile Ile Ile Ile Leu Ala Gly
          35                      40                      45

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Ala Ile Ala Leu Ile Ile Gly Phe Gly Ile Ser Gly Arg His Ser Ile

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50 55 60
 Thr Val Thr Thr Val Ala Ser Ala Gly Asn Ile Gly Glu Asp Gly Ile
 65 70 75 80
 Leu Ser Cys Thr Phe Glu Pro Asp Ile Lys Leu Ser Asp Ile Val Ile
 85 90 95
 Gln Trp Leu Lys Glu Gly Val Leu Gly Leu Val His Glu Phe Lys Glu
 100 105 110
 Gly Lys Asp Glu Leu Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr
 115 120 125
 Ala Val Phe Ala Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu
 130 135 140
 Lys Asn Val Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile
 145 150 155 160
 Thr Ser Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala
 165 170 175
 Phe Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr
 180 185 190
 Leu Arg Cys Glu Ala Pro Arg Trp Phe Pro Gln Pro Thr Val Val Trp
 195 200 205
 Ala Ser Gln Val Asp Gln Gly Ala Asn Phe Ser Glu Val Ser Asn Thr
 210 215 220
 Ser Phe Glu Leu Asn Ser Glu Asn Val Thr Met Lys Val Val Ser Val
 225 230 235 240
 Leu Tyr Asn Val Thr Ile Asn Asn Thr Tyr Ser Cys Met Ile Glu Asn
 245 250 255
 Asp Ile Ala Lys Ala Thr Gly Asp Ile Lys Val Thr Glu Ser Glu Ile
 260 265 270
 Lys Arg Arg Ser His Leu Gln Leu Leu Asn Ser Lys Ala Ser Leu Cys
 275 280 285
 Val Ser Ser Phe Phe Ala Ile Ser Trp Ala Leu Leu Pro Leu Ser Pro
 290 295 300
 Tyr Leu Met Leu Lys
 305

<210> 393

<211> 283

<212> PRT

<213> Homo sapiens

BNSDOCID: <WO_0036107A2_1_>

11729.1 contg

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TGATCTCAGCTCGCTGCAACCTCCGGCTCCACGTTCAAGTGATTCTCCTGCCTCAGCCTCC
CAAGTAGCTGGGATTACAGGGCGCCGCCACCACGCTCAGCTAATTTTTTTGTATTTTAGT
AGAGACAGGGTTTCACCAGGTTGCCAGGCTGCTCTTGAACCTCCTGACCTCAGGTGATCCA
CCCGCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCACGCCCCGGCCCCCAA
AGCTGTTTCTTTTGTCTTTAGCGTAAAGCTCTCCTGCCATGCAGTATCTACATAACTGACGT
GACTGCCAGCAAGCTCAGTCACTCCGTGGTC

11729-45.21.21.cons1

TAGGATGTGTTGGACCCCTCTGTGTCAAAAAAACCTCACAAAGAATCCCCTGCTCATTACA
GAAGAAGATGCATTTAAAAATATGGGTTATTTTCAACTTTTTATCTGAGGACAAGTATCCAT
TAATTATTGTGTCAAGAAGAGATTGAATACCTGCTTAAGAAGCTTACAGAAGCTATGGGAG
GAGGTTGGCAGCAAGAACAATTTGAACATTATAAAATCAACTTTGATGACAGTAAAAATG
GCCTTTCTGCATGGGAACCTTATTGAGCTTATTGGAAATGGACAGTTTAGCAAAGGCCATGGA
CCGGCAGACTGTGTCTATGGCAATTAAATGAAGTCTTTAATGAACCTTATATTAGATGTGTTA
AAGCAGGGTTACATGATGAALAAAGGGCCACAGACGGAAAAACTGCACTGAAAGATGGTT
TGTAATAAAACCCCAACATAATTTCTTACTATGTGAGTGAGGATCTGAAGGATAAGAAAGG
AGACATTCTCTTGGATGAALAAATGCTGTCTAGACTCCTTGCCCTGACAAAGATGGAAA

11729-45.21.21.cons2

TTAGAGAGGCCACAGAAGGAAGAAGAGTTAAAAGCAGCAAAGCCGGGTTTTTTGTTTTGT
TTTTTTTTGTTTTGTTTTGAGATGCAAGTCTCACTCTGTTGCCCAAGCTGGAGTACAACGGCA
TGATCTCAGCTCGCTGCAACCTCCGGCTCCACGTTCAAGTGATTCTCCTGCCTCAGCCTCC
CAAGTAGCTGGGATTACAGGGCGCCGCCACCACGCTCAGCTAATTTTTTTGTATTTTAGT
AGAGACAGGGTTTCACCAGGTTGGCCAGGCTGCTCTTGAACCTCCTGACCTCAGGTGATCCA
CCCGCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCACGCCCCGGCCCCCAA
AGCTGTTTCTTTTGTCTTTAGCGTAAAGCTCTCCTGCCATGCAGTATCTACATAACTGACGT
GACTGCCAGCAAGCTCAGTCACTCCGTGGTC

11731.1contig

TCTTTTTCTTTTGGATTTCTTCAATTTGTACAGTTTGATTTTATGAAGTTGTTCAAGGGCTAA
CTGCTGTGTAATTATAGCTTTCTCTGAGTTCTTCAAGCTGATTGTTAAATGAATCCATTTCTG
AGAGCTTAGATGCAAGTTTCTTTTCAAGAGCATCTAATTTGTTCTTTAAGTCTTTGGCATAAT
TCTTCTTTTCTGATGACTTTTATGAAGTAAACTGATCCCTGAATCAGGTGTGTTACTGAG
CTGCATGTTTTTAATTTCTTTTGGTTTAAATAGCTGCTTCTCAGGGACCAGATAGATAAGCTTAT
TTTGATATTTCTTAAAGCTCTTTTGAAGTTCTTTCAATTTCCATAATTTCCAGGTACACTGT
TTATCCAAAACCTTCTAGCTCAGTCTTTTGTGTTTCTGATTTGGACATCTTGTAGTCTG
CCTGAGATCTGCTGATGXTTCCAATCACTGCTTCCAAGTCCAGGTGGAGACTTTXCTTTCT
GGAGCTCAGCCTGACAATGCCCTTCTTGXTCCCT

FIG. 1A

11731.2contig

AGCCAGATGGCTGAGAGCTGCAAGAAGAAGTCAGGATCATGATGGCTCAGTTTCCCACAG
CGATGAATGGAGGGCCAAATATGTGGGCTATTACATCTGAAGAACGTAAGCATGATA
AACAGTTTGATAACCTCAACCTTCAGGAGGTTACATAACAGGTGATCAAGCCCGTACTTT
TTTCCTACAGTCAGGTCTGCCGGCCCCGGTTTTAGCTGAAATATGGGCCTTATCAGATCTG
AACAAAGGATGGGAAGATGGACCAGCAAGAGTTCTCTATAGCTATGAAACTCATCAAGTTA
AAGTTGCAGGGCCAACAGCTGCCTGTAGTCTCCTCCTATCATGAAACAAACCCCTATGT
TCTCTCCACTAATCTCTGCTCGTTTTGGGAATGGGAAGCATGCCCAATCTGTCCATTTCATCAG
CCATTGCCCTCCAGTTGCACCTATAGCAACACCCCTTGTCTTCTGCTACTTCAGGGACCAGTAT
TCCTCCCCTAATGATGCCTGCTCCCCTAGTGCCTTCTGTAGTA

11734.1contig

AATAGATTTAATGCAGAGTGTCAACTTCAATTGATTGATAGTGGCTGCCTAGAGTGCTGTG
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ATCTAAAATCTCACTTGTAGGAGAAACCACAGGCACCAGAGCTGCCACTGGTGCTGGCAC
CAGCTCCACCAAGGCCAGCGAAGAGCCCAATGTGAGAGTGGCGGTCAAGGCTGGCACCAG
CACTGAAGCCACCCTGGTCTGGCACTGGCACTGGCACTGTTATTGGTACTGGTACTGGC
ACCAGTGCTGGCACTGGCACTCTCTTGGGCTTTGGCTTTAGCTTCTGCTCCCGCCTGGATCC
GGGCTTTGGCCAGGGTCCGATATCAGCTTCGTCCAGTTGCAGGGCCCCGGCAGCAATTCTC
CGAGCCGAGCCCAATGCCCAATCGAGCTCTAATCTCGCCCTAGCCTTGGCTTCAGCTGCA
GCCTCAGCTGCAGCCTTCAAAATCCGGCTTCCATCCCTCTCGGTAC

11734.2contig

GCCAAGAAAGCCCCGAAGGCTGAAGCAATCTGGATGGGGAAGAGGATGGCAGCAGTGATCA
GAGTCAGGCTTCTGGAACCAACAGCTGSCCGAAGGGTCTCAAGGCCCTAATGGCCTCAAT
GGCCCCCAGGGCTTCAAGGGGTCCCATAGCCTTTGGGGCCCGCAGGGCATCAAGGACTCG
GTTGGCTGCTTGGGCCCCGAGAGCCTTCTCTCCCTGAGATCACCTAAAGCCCCGTAGGGCC
AAGCCTCGCCGTAGACCTGCCAAGCTCCAGTCAATCCCAAGAGCCTGAAGCACCACCACCT
CGGGATGTGCCCTTTTCCAAGGGAGCGCAAAATGAATTTGGTGAAGTACCTTTTGGCTAAAG
ACCAGACGAAGATTCCCATCAAGCCTCGGACATGCTGAAGGACATCAATCAAGAAATACA
CTGATGTGTACCCCGAAATCAATTGAACBAGCAGGCTATTCTTGGAGAAGGTATTTGGGAT
TCAATTGAAGGAAATTCATAAGCAATGACCACCTGTACATTCTTCTCACC

11736.1contig

GAGGTCTCACTATGTTGCCACGCTGTTCTGAACCTCCTGGGATCAAGCAATCCACCCATG
TTGGTCTCCAAAAGTGCTGGGATCATAGGCGTGAGCCACCTCACCCAGCCACCAATTTTCA
ATCAGGAAGACTTTTCTTCTTCAAGAAAGTGAAGCGTTTCCAGAGTATAGCTACACTATT
GCTTGCTGAGGCTCACTACAAAATTCCTTCTTAAAGGTTAGGATCGGTAAAGAAATTAG
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ATAATTATTCACATAATTCCTGATTAATACAGAAATAATGTATGAAATGCTTTGAGTTTCT
TGGAGTAAACTCCATTACTCATCCCAAGAAACCATATTATAAGTATCACTGATAATAAGAA
CAACAGGACCTTGTATATAATTCCTGGATAAGAGAAATAGTCTCTGGGTGTTTGTCTTAAT
TGATAAAATTTACTTGTCCATCTTTAGCTCAGAAATCACAATA

FIG. 1B

11736.2contig

AAGCGGAAATGAGAAAGGAGGGAAAATCATGTGGTATTGAGCGGAAAACCTGCTGGATGA
CAGGGCTCAGTCCTGTTGGAGAACTCTGGGTGGTGGCTGTAGAACAGGGCCACTCACAGTG
GGGTGCACAGACCAGCACGGCTCTGTGACCTGTTTGTACAGGTCCATGATGAGGTAAAC
AATACACTGAGTATAAGGGTTGGTTTAGAAAACCTTACAGCAATTTGACAAAGTAATCTTC
TGTGCAGTGAATCTAAGAAAAAAATGGGGCTGTATTTGTATGTTCTTTTTTTCATTTTCAT
GTTCTGAGTTACCTATTTTTATTGCAATTTACAAAAGCATCCTTCCATGAAGGACCGGAAGT
TAAAAACAAAGCAGGTCTTTATCACAGCACTGTCTAGAACACAGTTCAGAGTTATCCAC
CCAAGGAGCCAGGGAGCTGGGCTAACCAGAAATTTTGCTTTTGGTTAATCATCAGGTA
CTTGAGTTGGAATTGTTTTAATCCCATCATTACCAGGCTGGAXGTG

11739-1&2

CCGCGGCTCCTGTCCAGACCCTGACCCTCCCTCCCAAGGCTCAACCGTCCCCCAACAACCG
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GAGACATTCAAGCAAAGGTTGGACAACCTTTTCCAGAACAGAAAGGAAACTCATGCAT
CAGAAAAGGTGACTAATAAAGGTACCAGAAGATATGGCTGCACAAATACCAGAACTCTGA
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TAAAAATAAATCGA

11740.1.contig

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GGCACCTGATTTTTGTAATTTAACTGAAGAAATGTGATGACTTTTGTGGACATGAAAA
TCAGATGAGAAAACCTGTGGTCTTTCCAAAGCCTGAACCTCCCTGAAAACCTTTGCA

FIG. 1C

11766.1.contig

CTGGGATCAATTTCTCTTGATGTCATAAAAAGACTCTTCTTCTCTCTTCATCCTCTTCTTCAT
CCTCTTCTGTACAGTGCTGCCGGGTACAACGGCTATCTTTGTCTTTATCCTGAGATGAAGAT
GATGCTTCTGTTTCTCCTACCATAACTGAAGAAAATTCGCTGGAAGTCGTTTACTGGCTGT
TTCTCTGACTTACCTTCTTTGTCAAACCTGAGTCTTTTTACCTCATGCCCCCTCAGCTTCCAC
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GTCGAAGAGTCACTGTGATTTTTCTCCTCAATTTGCTGCAAATTTGCCTCTTTGCTGTCTGT
GCTCTCAGGCAACCCATTTGTTGTCATGGGGGCTGACAAAGAAACCTTTGGTCGATTAAAGT
GGCCTGGGTGTCCCAGGCCCAATTTATATTAGACCTCTCAGTATAGCTTGGTGAATTTCCAG
GAAACATAACACCAATTCATTCGATTTAAACTATTGGAATTGGTTTT

11766.2.contig

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GCTGAAAGATTTTGAGAAAGAGGGGCAAAAAGGAAGTTTGTCTGTCTGCTGGATCAGTTTCT
TTGTATGTAGCCAAGACTCGACAAACAATGATTACAGTGGTCCCAATTTAAAGGCTATTTT
ATTTTCAAACCTGGAGAAAGTCAATGGATGATTTGAGAACTTCAGCTCCTGAGCCAAGAGGT
CTCCCAACCCCTAATGTCCA

11773.2.contig

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CGCCCGCCCGCCCGCCCGCTCGCCAGCCGACCATGCTGCCGAGAGTGGGCTGCCCGCGCT
GCCGXTGCCG

11775-1&2

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ATACACAAACCAGTTTTCAAAATAGTAAAGCCAGTCACTTTGCAATTTGTAAGAAATAGGTA
AAAGATATAACACACCTTACACACACACACACACACACACAGTGTGCACGCCAATGAC
AAAAAACAATTTGGCCTCTCCTAAAAATAAGAACATGAAGACCCTTAATTGCTGCCAGGAG
GGAACACTGTGTACCCCTCCTACAAATCCAGGTAGTTTCTTTAATCCAATAGCAAATCT
GGGCATATTTGAGAGGAGTGAATCTGACAGCCACGTTGAAATCCTGTGGGGAACCAATTCAT
GTCCACCCACTGGTGCCCTGAAAAAATGCCAATAATTTTCCCTCCCACTTCTGCTGTGTC
TCTTCCACATCCTCACATAGACCCGAGACCCCTGGCCCTGGCTGGGCATCGCATTTGCTG
GTAGAGCAAGTCAATAGGTCTCGTCTTTGACCTCACAGAAGCGATACACCAAATTCCTGCT
CGGTCAATGTACATAACCAGAGA

FIG. 1D

11777.1&2.cons

CAGACGGGGTTCCTACTATGTTGGCTAGGCTGGTCTTGAACCTCCTGACTTCAGGTGATCTGC
CTGCCCTTGGCCTCCCAAAGTGCTGGGATTACAGGCATAAGCCACTGCGCCCGGCTGATCTG
ATGGTTTCATAAAGGCTTTTCCCCCTTTTGGCTCAGCACTTCTCCTTCTGCGCCCATGTGAAG
AAGGACATGTTTGGCTTCCCCCTTCCACCACGATTGTAAGTTGTTTCTGAGGCCTCCCCGGCC
ATGCTGAACCTGTGAGTCAATTAACCTCTTTCTTTATAAAATTATCCAGTTTGGGTATGTC
TTTATTAGTAGAATGAGAACAGACTAATACAACCTTAAAGGAGACTGACGGAGAGGATT
CTTCTGGATCCCAGCACTTCTCTGAATGCTACTGACATTCTTCTTGAGGACTTTAAACTG
GGAGATAGAAAACAGATTCCATGGCTCAGCAGCCTGAGAGCAGGGAGGGAGCCAAGCTA
TAGATGACATGGGCAGCCTCCCCCTGAGGCCAGGTGTGGCCGAACCTGGGCAGTGCTGCGAC
CCACCCACCAGGGCCAAGTCTGTCTTGGAGAGCCAAGCCTCAATCACTGCTAGCCTCA
AGTGTCCCCAAGCCACAGTGGCTAGGGGGACTCAGGGAACAGTTCCAGTCTGCCCTACTT
CTCTTACCTTTACCCCTCATACCTCCAAAGTAGACCATGTTTATGAGGTCCAAAGG

11779.2.contig

AAGCGAGGAAGCCACTGCGGCTCCTGGCTGAAAAGCGGCGCCAGGCTCGGGAACAGAGG
GAACGCGAAGAACAGGAGCGGAAGCTGCAGGCTGAAAAGGACAAAGCGAATGCGAGAGG
AGCAGCTGGCCCGGGAGGCTCAAGCCCGGGCTGAACGTGAGGCCGAGGCCCGGAGACGG
GAGGAGCAGGAGGCTCGAGAGCAAGCCCGAGCCTGAGCAGGAGGAGCAGGAGCGACTGCA
GAAGCAGAAAGAGGAAGCCGAAGCCCGTCCCGGAAGAAGCTGAGCGCCAGCGCCAGG
AGCGGGAAAAGCACTTTTCAAGCAGGAACAGGAGAGACAAGAGCGAAGAAAAGCGGCTG
GAGGAGATAATGAAGAGGACTCGGAATCAAGAGCCGCGCAACCAAGAAGCAGGATGC
AAAGGAGACCGCAGCTAACAAATCCCGCCAGACCTTGTGAAAGCTGTAGAGACTCGGC
CCTCTGGGCTTCCAGAAAGGATTCTATTCAGAAAGGAAGGAGCTKGGCCCCCAKGGGA

11781 & 37.cons

CTCTGTGGAAAACCTGATGAGGAATCAATTTACCAATTACCCATGTTTCTCATCCCCAAGCAAA
GTGCTGGGTCTGAATTACTGCAACACAGAGAACGAAGAAGAATTTTCTCATACAGGATC
AGCAGGCCCTCATCACACTGGGCTCGATTTCATACTACCCACACAGAGCCGCTTTCTCTC
CAGTGTGACCTACACACTCACTCCTCTTACCAGATGATGTTGCCAGAGTCAGTAGCCATT
GTTTGCTCCCCCAAGTTCCAGGAAGCTGGATTCTTTAACTAACTGACCATCGACTAGAGG
AGATTTCTTCTGTGCGCCAGAAAGCAATTCATCCACACACCAAGGATCCACCTCTGTTCTG
TAGCTCCAGCCACCTGACTGTTGTGGACAGAGCAGTGACCATCACAGACCTTCGATGAGC
GTTTGAGTCCAACACCTTCCAAGCAACAACAAACCATATCAGTGTACTGTAGCCCCCTTAAT
TTAAGCTTTCTAGAAAGCTTTGGAACTTTTGTAGATAGTAGAAAGGGGGGCATCACXTGA
GAAAGAGCTGATTTTGTATTTACGCTTTGAAAAGAAATAACTGAACATATTTTATAGGCA
GTCAGAAAGACAACATGCTCAGCCAAAAGCAACTGTAACTCAGAAATTAAGTTACTCAGA
AATTAAGTAGCTCAGAAAATTAAGAAAGAATGGTATAATGAACCCCATATACCTTCTCTC
TGGATTACCAATTTGTTAACAATTTTCTCTCAGCTATCCTTCTAATTTCTCTCTAATTC
AATTTGTTTATATTTACCTCTGGGCTCAATAAGGGCATCTGTCCAGAAATTTGGAAGCCAT
TTAGAAAATCTTTTGGATTTTCTGTGGTTTATGGCAATATGAATGGAGCTTATTACTGGG
GTGAGGGACAGCTTACTCCAATGACCAGATTGTTTGGCTAACACATCCCCAAGAATGATT
TTCTCAGGAATTAATGTTAATTAATAATAATTCAGGATATTTTCTCTACAATAAAGTAA
CAAT

FIG. 1E

11781-76-87-37

CTCTGTGGAAAACCTGATGAGGAATGAATTTACCATACCCATGTTCTCATCCCCAAGCAAA
GTGCTGGGTCTGATTACTGCAACACAGAGAACGAAGAAGAACTTTTCCTCATACAGGATC
AGCAGGGCCTCATCACTGGGCTGGATTTCATCTACCCACACAGACCGGTTTCTCTC
CAGTGTGCGACCTACACACTCACTGCTCTTACCAGATGATGTTGCCAGAGTCAGTAGCCATT
GTTTGCTCCCCAAGTTCCAGGAACTGGATTCTTTAACTAACTGACCATGGACTAGAGG
AGATTTCTTCTGTGCGCCAGAAAGGATTTTCATCCACACAGCAAGGATCCACCTCTGTTCTG
TAGCTGCAGCCACGTGACTGTTGTGGACAGAGCAGTGACCATCACAGACCTTCGATGAGC
GTTTGAGTCCAACACCTTCCAAGAACAACAAAACCATATCAGTGTACTGTAGCCCTTAAT
TTAAGCTTTCTAGAAAGCTTTGGAAGTTTTGTAGATAGTAGAAAGGGGGGCATCACCTGA
GAAAGAGCTGATTTGTATTTACGGTTTGAAGAAATAACTGAACATATTTTTAGGCAA
GTCAGAAAGAGAACATGGTCACCCAAAAGCAACTGTAACCTCAGAAATTAAGTTACTCAGA
AATTAAGTAGCTCAGAAATTAAGAAAGAAATGGTATAATGAACCCCATATACCTTCTCTC
TGGATTACCAATTTGTTAACATTTTTCTCTCAGCTATCCTTCTAATTTCTCTAATTTCT
AATTTGTTTATATTTACCTCTGGGCTCAATAAGGGCATCTGTGCAGAAATTTGGAAGCCAT
TTAGAAAATCTTTTGGATTTTCTGTGGTTTATGGCAATATGAATGGAGCTTATTACTGGG
GTGAGGGACAGCTTACTCCAATTTGACCAGATTGTTTGGCTAACACATCCCGAAGAATGATT
TTGTCAGGAATTAATTGTTATTTAATAAATATTTTACGGATATTTTTCTCTACAATAAAGTAA
CAATTA

11784-1 & 2

GGACGACAAGGCCATGCGGATATCGGATCGGAATTCAGCCCTTTGGAATTAATAAACCT
GGAACAGGGAAGGTGAAAGTTGCACTGAGATGTCTTCCATATCTATACCTTTGTGCACAGT
TGAATCGGAACTGTTTGGGTTTAGCCCATCTTAGAGTTGATTGATGGAATAAGCAGACAG
GAACCTGCTGGGAGGTCAAGTGGGGAACCTTGGTGAATGTGGAATAACTTACCTTTGTGCTC
CACTTAAACCAGATGTGTTCCAGCTTTCTGACATGCAAGGATCTACTTTAATTCACACT
CTCATTAATAAATGAATAAAAGCCAAATGTTTGGCACCTGATATAATCTGCCAGGCTATG
TGACAGTAGGAAGGAATGGTTTCCCTAACAAAGCCCAATGCACTGGTCTGACTTTATAAAT
TATTAATAAATAAGCACTATTAATC

11785.2.contig

GCCAGTGACATTCACCATCATGCGAACCACCTTCCCTTTTCTTCAGGATTCTCTGTAGTGG
AAGAGAGCACCCAGTGTTCGGCTGAAACATCTGAAAGTAGGGAGAAGAACCTAAAATA
ATCAGTATCTCAGAGGGCTCTAAGGTGCCAAGAAGTCTCACTGGACATTTAAGTGCCAAC
AAAGGCATACTTTCCGAATCCCAAGTCAAAACTTTCTAACTTCTGTCTCTCAGAGACA
AGTGAGACTCAAGAGTCTACTGCTTAGTGGCAACTACAGAAAATGGTGTTACCCAGAA
AAACAGGAGCAATTAGAAATGGTTCCAAATTTCAAAGCTCCGCAACAGGATGTGCTTT
CCTTTCGCCAATTAGCCTTTCTCTCTTCCCTTCTCTTTAATAACCACT

FIG. 1F

11718-1&2 cons

TGCGCTGAAAA⁵AACGGCCTCCTTTACTGTTAA¹⁰ATGCACCCACAGGTGCTTAGCCGTGGG
CATCTCAACCACCAGCCTCTGTGGGGGGCAGGTGGGGCTCCCTGTGGGCCTCTGGGCCCAC
GTCCAGCCTCTGTCTCTGCCTTCCGTTCTTCGACAGTGTTC¹⁵CCGGCATCCCTGGTCACTTG
GTACTTGGCGTGGGCCTCCTGTGCTGCTCCAGCAGCTCCTCCAGGXGGTCGGCCCGCTTCA
CCGACGCCTCATGTTGTGTCCGGAGGCTGCTCACGGCCTCCTCCTTCCTCGCGAGGGCTGT
CTTCACCCCTCCGGXGCACCTCCTCCAGCTCCAGCTGCTGGCGGGCCTGCAGCGTGGCCAGC
TCGGCCTTGGCCTGCCGCGTCTCCTCCTC²⁰ARAGGCTGCCAGCCGGTCTCGAACTCCTGGC
GGATCACCTGGGCCAGGTTGCTGCGCTCGCTAGAAAGCTGCTCGTTACCCGCTGEGCATC
CTCCAGCGCCCGCTCCTTCTGCCGCACAAGGCCCTGCAGACGCAGATTCTCGCCCTCGGC²⁵T
CCCCAAGCTGGCCCTTCAGCTCCGAGCACCGCTCCTGAAGCTTCGGCTCCGACTGCTCCAG
CTCGGAGAGCTCGGCCTCGTACTTGTCCCGTAAGCGCTTGATGCGGCTCTCGGCAGCCTTC
TCACTCTCCTCCTTGGCCAGCGCCATGTGGGCTCCAGCCGGTGAATGACCAGCTCAATCT
CCTTGTC³⁰CCCGCCTTTCGGATTCTTCCCTCAGCTCCTGTTCCCGGTTACAGCAGCCACGCC
TCCTCCTTCCTGGTGCGGCCGGCCTCCACGCCTGCCTCTCCAGCTCCAGCTGCTGCTTCAG
GGTATTCAGCTCCATCTGGCGGGCCTGCAGCGTGGCCA

13690.4

CAACTTATTACTTGAAAATTATAATATAGCCTGTCCGTTTGCTGTTTCCAGGCTGTGATATAT
TTTCCTAGTGGTTTGACTTTAAAAATAAATAAGGTTTAA¹⁰TTTTCTCCCC

13693.1

TGCAAGTCACGGGAGTTTATTTA⁵TTTAA¹⁰TTTTTTTCCCCAGATGGAGACTCTGTGCGCCACG
CTGGAGTGCAATCGTGTGATCTTGGCTCACTGCAACCTCCACCTCCTGGGTTCAAGCGATT
CTCCTGCCACAGCCTCCCGAGTAGCTGGGATTACAGGTGCCCGCCACCACACCCAGCTAAT
TTTTATATTTTAGTAAAGACAGGGTTTCCCATGTTGGCCAGGCTGGTCTTGA¹⁵ACTTCTGA
CCTCAGGTGATAGCACTGGCTCGCCCTCCCAAGTGTTCGGATTACAGCGCTGACCTACCC
GTGCCTGCCACGCCACTGGAGTTTAAAGGACAGTCATGTTGGCTCCAGCCTAAGCGGGCA
TTTTCCCCCATCAGAAAGCCCGCGGCTCCTGTACCTCA²⁰AAAAAGGGCACCTGTAAAGTCAG
TCAGTGAAGTCTCTCCTCTAACTGCCACCCGGGGCCATTGGCNTCTGACACAGCCTTGCC
AGGANCCCTGCATCTGCAAAAGAA²⁵AACTTCACTTCCTTTCCG

13694.1

CAGAGAATCTKAGAAAGATGTCGGCTTTTCTTTAATGAATGAGAGAAGCCCA⁵TTTGTATC
CCTGAATCATTGAGAAAAGCGCGCGGCTGGCGACAGCGCGACCTAGGGATCGATCTGGAG
GGACTTGGGGAGCGTGACAGACCTCTAGCTCGAGCGCGAGCGACCTCCCGCGGGATGC
CTGGGGAGCAGATGGACCTACTGGAAGTCAGTTGGATTACAGATTCTCTCAGCAAGATAC
TCCTTGCTGATAATTGAAGATTCTCAGCCTGAAGGCCAGGTTCTAGAGGATGATTCTGGT
TCTCACTTCAGTATGCTATCTCGACACCTTCCTAATCTCCAGACGCACA¹⁰AAAGAAAATCCTG
TGTTGGATGTTGNGTCCAATCCTTGAACAAACAGCTGGAGAAGAACGAGGAGACCGGTAA
TAGTGGCTTCAATGAACA¹⁵TTTGAAGAAAACCAGGTTGCAGACCCTG

FIG. 1G

13694.2

GACTGTCCTGAACAAGGGACCTCTGACCAGAGAGCTGCAGGAGATGCAGAGTGGTGGCAG
GAGTGGAAAGCCAAAGAACACCCACCTTCTCCCTTGAAGGAGTAGAGCAACCATCAGAAG
ATACTGTTTTATTGCTCTGGTCAAACAAGTCTTCTGAGTTGACAAAACCTCAGGCTCTGGT
GACTTCTGAATCTGCAGTCCACTTTCCATAAAGTCTTGTGCAGACAACTGTTCTTTGCTTC
CATAGCAGCAACAGATGCTTTGGGGCTAAAAGGCATGTCTCTGACCTTGCAGGTGGTGG
ATTTTGCTCTTTTACAAACATGTACATCCTTACTGGGCTGTGCTGTACAGGGATGTCTTGC
TGGACTGTTCTGCTATGGGGAATCTTCTGGTGGACTGTTCTTCAATGCTTAATTGCAGTATTA
GCATCCACATCAGACAGCCTGGTATAACCAGAGTTGGTGGTTACTGATTGTAGCTGCTCTT
TGTCCACTTCATATGGCACAAAGTATTTCTCAACATCCTGGCTCTGGGAAG

13695.1

GAAATGTATATTTAATCATTCTCTTGAACGAATCAGAACTCTRAAATCAGTTTTCTATAACAR
CATGTAATACAGTCACCGTGGCTCCAAAGGTCCAGGAAGGCAGTGGTTAACACATGAAGAG
TGTGGGAAGGGGGCTGGAAACAAGTAATCTTTCTTCAAAGCTTCATTCCTCAAGGCCT
CAATTCAGCAGTCAATGTCTTCTTCAAAGTCTGTGTGTGCTTCATGGAAGGTATAT
GTTTGTTCCTTAATTTGAATTTGTGGCCAGGAAGGGTCTGGAGATCTAAATTCAGAGTAAG
AAAACCTGAGCTAGAACTCAGGCAATTTCTTTACAGAACTTGGCTTGCAGGGTAGAATGA
ANGGAAAGAACTTAGAAGCTCAACAAGCTGAAGATAATCCCATCAGGCATTTCCCATAG
GCCTTGCAACTCTGTTCACTGAGAGATGTAATCCTG

13695.2

AGTCTGGAGTGAGCAAAACAAGACCAACAACAARRACAAGCCAAAAGCAGAAAGCCTCCA
ATATGAACAAGATAAAATCTATCTTCAAAGACATAATTACAAGTTGGGAAAATAATTCAATGT
GAACCTAGACAAGTGTGTTAAGAGCTGATAAGTAAAAATCCACGTGGAGACAAGTGCAATCCCC
AGATCTCAGGGACCTCCCCCTGCTCTCACTTGGGGAGTGAGAGGACAGGATAGTGCAATG
TTCTTTGTCTCTGAATTTTACCTTATAATGCTGTAAATGTTGCTCTGACGAAGCCCCCTGGAA
AGTCTATCCCAACATAATCCACATCTTATAATCCACAAATTAAGCTGTAGTATGTACCCCTAA
GACGCTGCTAATTCAGCTCCACTTCCCAACTCAGGGGGGGCTGCAATTTAGTAATGGGTCA
AATGATTCACTTTTATGATGCTTCCCAAGGTGCTTGGCTTCTCTTCCCAACTGACAAATG
CCCAAGTTGAGAAAATGATCATAATTTAGCATAAACCGAGCAATCGGGCAGCCCC

13697.1

TAGCTGTCTTCTCACTCTTATGGCAATGACCCCATATCTTAATGGATTAAGATAATGAAA
GTGTATTTCTTACACTCTCTATCTATACCAGAAGCTGAGGTGATACCCCGCTTGTCAATGT
CATCCATAATCTGGCACTCAGGGGGAACTTTCTGGAATATTGCCAGGGAACCATGGCAGA
GGGGCAGAGTGCAATCTGCGGGAAATGCACATTCGCTCAGCCTGGGTAAATGAGTGATATAC
ATTACCTCTGTTTACAACTCAATGCCCCAGCAGCTCACAAGGCCCCACCAAAATACCAGAG
CCCAAGAAATGTAGTCTCTGATATGCTTTGCTGTGTCCCAACCCAAATCTCATCTTGA
ATTGTAAGCTCCCATAAATCCCATGTGTTGTGGCAGGGACCTGGTG

FIG. 1H

13697.2

ATCATGAGGATGTTACCAAAGGGATGGTACTAAACCATTGTATTTCGTCTGTTTTCACA
GCTTTGAAGATACTACCTGAGACTGGGTAATTTATAAAACAAAAGAGATTTAATTGACTCAC
AGTTCTGCAATGGCTGAAGAGGGCTCAGGAAACTTACAGTCATGGTGGAAGGCAAAGGAGG
AGCAAGGCATGTCTTACATGTCAGTAGGAGAGAGCGAGAGCAGGAGAACCTGCCACTT
ATAAACCAATTCAGATCTCATAACTCCCTATCATGAGAAAAACATGGAGGAAACCACCCTC
ATGATCCAATCACCTCCCGCCAGGTCCCTCCCTCCGACACGTGGGGATTATAATTGAGGATT
AGAGGGACACAGAGACAAACCATATCATCATTCATGAGAAATCCACCCTCATAGTCCAAT
CAGCTCCTACCAGGCCCCACCTCCAACACTGGGGATTGCAATTCAACATGAGATTTGGATG
GGGACACAGATTCAAACCATATCATAC

13699.1&2

CATGGCCTTTCTCCTTAGAGGCCAGAGGTGCTGCCCTGGCTGGGAGTGAAGCTCCAGGCAC
TACCAGCTTTCTGATTTTCCCGTTTGGTCCATGTGAAGAGCTACCACGAGCCCCAGCCTCA
CAGTGTCCTCAAGGGCAGCTTGGTCTCTTGTCTGAGAGGCAGGCTGGTGTGACCCT
GGGAACCTTGACCCGGGAACAACAGGTGGCCAGAGTGAGTGTGGCCTGGCCCCCTCAACCT
AGTGTCCTCTCTCTCTCTCTGGAGCCAGTCTTGAGTTAAAGGCATTAAGTGTAGATA
CAAGCTCCTTGTGGCTGGAAAAACACCCCTCTGCTGATAAAGCTCAGGGGGCCTGAGGA
AGCAGAGGGCCCTTGGGGGTGCCCTCTGAAGAGAGCGTCAGGCCATCAGCTCTGTCCCTC
TGGTCTCTCCACGTCTGTCTCTCACCTCCATCTCTGGGAGCAGCTGCACCTGACTGGCCAC
GCGGGGGCAGTGGAGGCCACAGGCTCAGGCTGGCCGGGCTACCTGCCACCCTATGGCTTAC
AAAGTAGAGTTGGCCCACTTCTCTCCAGCTGAGGGGAGCCTCTGACTCCTAACAGTCTT
CCTTGGCCCTGCCATCATCTGGGGTGGCTGGCTGTCAAGAAAGGCCGGGCATGCTTTCTAAA
CACAGCCACAGGAGGCTTGTAGGGCATCTTCCAGGTGGGAAACAGTCTTAGATAAGTAA
GGTGACTTGCCTAACGCCCTCCAGCACCTTGTATCTTGGAGTCTCACAGCAGACTGCATGT
SAACAACCTGGAACCGAAAAACATCCCTCAGTATAAAA

13703.3

CCAGAACCTCCTTCTCTTTGGAGAAATCCGGAGCCCTCTTGGAGACACAGAGGGTTTCACCT
TGGATGACCTCTAGAGAAAATGCCCAAGAAAGCCACCTTCTGGTCCCAACCTGCAGACCCC
ACAGCAGTCAGTTGGTCAGCCCTCTGCTAGAAAGGTCACTTGGCTCCATTGCCCTGCTTCCA
ACCAATGGGCAGGAGAGAAAGCCCTTTATTTCTGCCCCACCCATTCTCCTGTACCAGCACCT
CCGTTTTAGTCAGYGTGTGCCASCAACCGTACCGTTTACACAGTCA

13705.1

TGCATGTAGTTTTATTATGTGTTTTGCTGGAAAAACCAAGTGTCCCAGCAGCATGACTGA
ACATCACTCACTTCCCTACTTGATCTACAAGGCCAACGCCGAGAGCCCAAGACCAGGATTC
CAAACACACTGCACCAGAAATATTGTGGATCCGCTGTACGTAAGTGTCCGTCACTGACCCA
RACGCTGTTACGTGGCACAATGACTGTACAGTGCCACGTAACAGCACTGTACTTTTCTCCCA
TGAACAGTTACCTGCCATGTATCTACATGATTGAGAACATTTTGAACAGTTAATTCTGACA
CTTGAATAATCCCATCAAAAAACCGTAAAAATCACTTTGATGTTTGTAAACGACAACATAGCAT
CACTTTACGACAGAAATCATCTGGAATAACAGAACAAACGAATACATACATCTTAAAAAATG
CTGGGGTGGGCCAGGCCACAGCTTCAAGCCTGTAAATCCCAAGCACTTTGGGAGGCTTAAGCG
GGTG

FIG. 11

13709.2

TATGAAGAAGGGAAAAGAAGATAAATTTGTGAAAGAAATGGGTCCAGTTACTAGTCTTTGA
AAAGGGTCAGTCTGTAGCTCTTCTTAATGAGAAATAGGCAGCTTTCAGTTGCTCAGGGTCAG
ATTTCTTAGTGGTGTATCTAATCACAGGAAACATCTGTGGTTCCTCCAGTCTCTTTCTGG
GGGACTTGGGCCCCACTTCTCAATTTCAATTAATTAGAGGAAATAGAACTCAAAGTACAATTT
ACTGTTGTTTAAACAATGCCACAAAGACATGGTTGGGAGCTATTTCTTGATTTGTGTAAAT
GCTGTTTTTGTGTGCTCATAATGGTTCCAAAAATGGGTGCTGGCCAAAGAGAGATACTGT
TACAGAAGCCAGCAAGAAGACCTCTGTTCAATTCACACCCCCGGGGATATCAGGAATTGAC
TCCAGTGTGTGCAAATCCAGTTTGGCCTATCTTCT

13712.1&2

TGAGGGACTGATTGGTTTGCTCTCTGCTATTCAATTCCTCCCAAGCCCCACTTGTTCCTGCAGCG
TCCTCCTTCTCATTCCCTTTAGTTGTACCCTCTCTTTTCATCTGAGACCTTTCCTTCTTGATGT
CGCCTTTTCTTCTTCTTGTCTTTTCTCATGTTCTGCTCAGCATGTTCTGGGTGCTTCTCATCT
GCATCATTCTTTTCTGATGCTGTAGCTTCTTCTCCTCTTTCTGCTCCTTTTCTTTTCTTTT
TTTTGGGGGGGCTTGTCTCTGACTGCAGTTGAGGGGGCCCCAGGGTCTGGCCTTTGAGACG
AGCCAGGAAGGCCTGCTCCTGGGCCCTCTAGGCGAGCAAGCTTGGCCTTCAATTGTGATCCCA
AGACGGGCAGCCTTGTGTGCTGTTCCGCCCTCACAGGCTTGGAGCAGCATCTCATCAGTCA
GAATCTTTGGGGACTTGGACCCCTGCTTGTGCTCATCACTGCAGCTCTCCAAGTCTTTGTTT
GGCTTCTCTCCACCTGAAGTCAATGTAGCCATCTTCACAACTTCTGATACAGCAAGTTGG
GCTTGGGATGATTATAACGGGTGGTCTCTTAGAAAGGCTCCTTATCTGTACTCCATCCTG
CCCAGTTTCCACTACCAAGTTGGCCCGAGTCTTGTGAAAGAGCTCAATCCACCAGTGGTTT
GTGA.ACTCCTTGGCAGGCTCATGTCTACCCCATGAGTGTCTTGTTCAGYGTACCCCTGA
GAGCCTGAGTGATACCAATCTCTCTCCG

13714.1&2

GACAACATGAAATAAATCCTAGAGGACAAATAA.AACTCAATAGAGTGTAGTCTAGTTAA
AAACTCGAAAAATGAGCAAGTCTGGTGGCAGTGGAGGAAGGGCTATACTATAAATCCAAG
TGGGCCCTCCTGATCTTAACAAGCCATGCTCATTATACACATCTCTGAACTGGACATACCAC
CTTTACGCAGGAAACAGGGCTTGGAACTTCTAAGGGAAATTAACATGCCACCACCCACATC
TAACCTACCTGCCGGGTAGGTACCATCCCTGCTTGGCTGAAATCAGTGCTC

13716.1&2

TTGGAATTAAATAAACCTGCAACAGCGGAAGGTGAAAGTTGGAGTGAGATGTCTTCCATAT
CTATACCTTTGTGCACACTTGAATCGGAAGTGTGTTGGGTTTACGGCATCTTAGAGTTGATT
GATCGAAAAACCAGACAGGAAGTGGTGGCAGGTCAAGTGGGGAAGTTGGTGAATGTGGA
ATAACTTACCTTTGTGCTCCACTTAAACCAGATGTGTTGCAGCTTTCCTGACATGCAAGGA
TCTACTTTAATTCACACTCTCATTAAATAAATTGAATAAAAGGGAATGTTTTGGCACCTGA
TATAATCTGCCAGGCTATGTGACAGTAGCAAGGAATGGTTTCCCCTAACAAAGCCCAATGC
ACTGGTCTGACTTTATAAATAATTAATAA.AATGAACTATTATC

FIG. 1K

13718.2

AAACTGGACCTGCAACAGGGACATGAATTTACTGCARGGTCTGAGCAAGCTCAGCCCCTCT
ACCTCAGGGCECCACAGCCATGACTACCTCCCCCAGGAGCGGGAGGGTGAAGGGGGCCTG
TCTCTGCAAGTGGAGCCAGAGTGGAGGAATGAGCTCTGAAGACACAGCACCCAGCCTTCT
CGCACCAGCCAAGCCTTAAGCTGCTGACCTGAACCAGAACCAGCTGAACTGCCCC
TCCAAGGGACAGGAAGGCTGGGGGAGGGAGTTTACAACCCAAGCCATTCCACCCCCTCCC
CTGCTGGGGAGAATGACACATCAAGCTGCTAACAATTGGGGGAAGGGGAAGGAAGAAAA
CTCTGAAAACAAAATCTTGT

13722.3

CATGCGTTTCACCACTGTTGGCCAGGCTGGTCTCGAACTCCTGGCCTCAAGCAATCCACCC
GCCTCAGCCTCCAAAAGTGTCTGGGATTACAGATGTGAGCCATGGCACCATGCCAAAAGGC
TATATTCTGGCTCTGTGTTCCGAGACTGCTTTAATCCCAACTTCTCTACATTAGATTA
AAAAATATTTTATTTCATGGTCAATCTGGAACATAATTACTGCATCTTAAGTTTCCACTGAT
GTATATAGAAGGCTAAAGGCACAATTTTTATCAAACTCTAGTAGAGTAACCAACATAAAA
TCATTAATTACTTTCAACTTAATAACTAATTGACATTCTCAAAAGAGCTGTTTTCAATCCT
GATAGGTTCTTTATTTTTTCAAAATATAATTGCCATGGGATGCTAATTTGCAATAAGGCGC
ATAATGAGAATACCCCAAACCTGGA

13722.4

GTTGGACCCCCAGGGACTGGAAAGACACTCTTCCCCGAGCTGTGGCGGGAGAAGCTGAT
GTTCCTTTTTATTATGCTTCTGGATCCCAATTTGATGAGATGTTTGTGGGTCTGGGAGCCAG
CCGTATCAGAAATCTTTTAGGCAAGCAAGGCGAATGCTCCTTGTGTTATATTTATTGAT
GAATTAGATTCTGTTGGTCCGAAGAGAAATGAATCTCCAATGCATCCATAATCAAGGCAGA
CCATAAATCAACTTCTTGGCTGAAAATGGATGGTTTTAAACCCAATGAAGGAGTTATCATAAT
AGGAGCCACAAACTTCCCAGAGGCAATAGATAATGCTTTAATACCGTCTGTTGTTTTGA
CATGCAAGTTACAGTTCCAAGCCAGATGTAAGGCTCGAACAGAAATTTTGAAATGGTA
TCTCAATAAAAATAAGTTTGATCAATCCCGTTGATCCAGAAATTATAGCCTCGAGGTACTG
GTGGCTTTTCCGGAAGCAGAGTTGGGAGAAATCTT

13724-13698-13748

GCCTACAACATCCAGAAAGAGTCTACCTTGCACCTGGTGCTSCGTCTCAGAGGTGGGATGC
AGATCTTTCGTGAAGACCCCTCACTGGTAAGACCATCACTCTCGAAGTGGAGCCGAGTGACA
CCAATGAGAACGTCAAAGCAAGATCCARGACAAGGAAGGCRTYCCTCCTGACCAGCAGA
GGTTGATCTTTCCCGGAAGCAGCTGCAAGATGGDCCGACCCCTGTCTGACTACAACATCC
AGAAAGAGTCTYACCCCTGCACCTGGTCTCTCCGTCTCAGAGGTGGGATGCCARATCTTCGTGA
AGACCCCTCACTGGTAAGACCATCACTCTGAGGTGGAGCCCAAGTGACACCATCGACAATG
TCAAGCCAAAGATCCAAGATAAGGAAGGCATCCCTCCTGATCAGCAGAGGTTGATCTTTG
CTGGGAACAGCTGGAAGATGCAAGCCACCCCTGTCTGACTACAACATCCAGAAAGAGTCCA
CTCTGCACTTGGTCTCTGCCCTTGAGCGGGGGGTGTCTAAGTTTCCCTTTTAAGGTTTCMAC
AAATTTCAATTGCACTTTCTTTCAATAAAGTTGTTGCAATCCC

FIG. II

13730.1

GAACTGGGCTCTGAGCCCAAGTCATGCCCTTGTGTCCGCATCTGCCGTGTACCTCTGKCC
TGCCCCCTACCCCTCCCTCCTGGTCTTCTGAGCCAGCACCATCTCCAAATAGCCTATTCTT
CCTGCAAATCACACACACATGCCGGGCCACACATACCTGCTGCCCTGGAGATGGGGAAGTA
GGAGAGATGAATAGAGGGCCCATACATTGTACAGAAGGAGGGGCAGGTGCAGATAAAAGC
AGCAGACCCAGCGGCAGCTGAGGTGCATGGAGCACGGTTGGGGCCGGCATTGGGCTGAGC
ACCTGATGGGCTCATCTCGTGAATCCTCGAGGCAGCGCCACAGCAGAGGAGTTAAGTGG
CACCTGGGGCCGAGCAGAGCAGGAGACTGAGGGTTCAGAGTGGAGGCTAAGCTGCCCTGGA
ACTCCTCAATCTTGCTGCCCTCTAGTATGAAGCCCCCTTCTGCCCTACAATTCTGA

13732.1

ATGGATCTTACTTTGCCACCCAGGTTGGAGTGCAGTGCTGCAATCTTGGCTCACTGCAGCC
TTAACCTCCCAGGCTCAAGCTATCCTCCTGCCAAAGCCTTCCACATAGCTGGGACTACAGG
TACACNGCCACCACACCCAGCTAAAATTTTTGTATTTTTGTAGAGACGGGATCTCGCCAC
GTTGCCAGGCTGGTCCCATCCTGACCTCAAGCAGATCTGCCACCTCAGCCCCCAACGT
GCTAGGATTACAGGCGTGAGCCACCCACCCAGCCTTTGTTTTGCTTTAATGGAATCACC
AGTTCCCTCCGTGTCTCAGCAGCAGCTGTGAGAAATGCTTTGCATCTGTGACCTTTATGA
AGGGGAACCTTCCATGCTGAATGAGGGTAGGATTACATGCTCCTGTTCCCGGGGGTCAAG
AAAGCCTCAGACTCCAGCATGATAAGCAGGGTGAG

13732.2

ATAGGGGCTTTAAGGAGGGAAATTCAGGTTCAATGAGGTGTAAGGCCAGGGCTCTTATCC
AGTAAGACTGGGGTCTTACATGAGAAAGAGACACCCGAGGTCTTCTCTCTGCGGTGTG
AGGATGCATCAAGAAGCGGGCCCTGTGCAAGCGAAGGAGAGGCCCGACCAAGAAACCGAC
ACCTTCATCTTGGACTTGCAGCCTCTAGAAGTGAAGAAATAACTGTCTGTTGGTTAAGCCA
CCCAGTTTGTAGTATCTCTTATGGCTTCTAAGCAGACTAACAAACAAACACCCAAAATT
AACTGATGGCTTCCGTCTCTTCTGTAAATAATGCTATGAGAGAATTTCACTCACTGTTTT
GCAGTTTCTCCCTCAGTCCCTGGTCTTCTTCTCACATAATCCCAATTTCAATTTATAGTTC
ATGGCCCAGGCAGAGTCATTCATCAGGGCATCTCTGAGCTAAACCAGCACCTGCTCTGCT
CACTTCTTGAATGGCTGCTCATCATCAGCCCTCTTGCAGAGATTTCAATTTCTCCCGTGCCA
GGTACTTCACGCACCAAGCTCA

FIG. 1M

13735.1

GGATAATGAAGTTGTTTTATTTAGCTTGGACAAAAAGGCATATTCCTCTATTTTCTTATACA
ACAAATATCCCCAAAATAAAGCAAGCATATATCTTGAATGTGTAATAATCCAGTGATA
AACAAGAGCAGTACTTTAAAAAGAAAAAAATATGTATTTCTGTCAGGTTAAAAATGAGAA
TCAAAACCACTTACTCTGCTAACTCATTATTTTTGCTTTCTTTTGGTTAAGAGAGGCAAT
GCAATACACTGAAAAAGGTTTTATCTTATCTGGCAATTGGAATTAGACATATTCAAACCCC
AGCCCCCATTTCCAACTTTAAGACCACAAACAAAGTAATTTACTTTTCTGAACATTGGTTTT
TTCTGGAAAAATGGGAATTATAAAATAGACTTTTGCAGACTCTTATGAGATTAAATAAGATA
ATGTATGAAATTCTTTCTTTCTTTTACTTTCTTTTCTTTTGGAGATGGAGTCTCACCCCGT
CACCCAGGCTGGAGTACAGTG

13735.2

CCACTGCACTCCAGCCTGGGTGACGGAGTGAGACTCTGTCTCAAAAAACAAACAAACAA
ACAAACAAAAAACTGAAAAGGAATAGAGTTCTCTTTCTCTCATATATGAATATATTTATTT
CAACAGATTGTTGATCACCTACCATATGCTTGGTATTGTTCTAATTGCTGGGGATACAGCA
AGAGGTTCTGCAGAACTTCATGGAGCATGAAAGTAAATAAACAAAGTTAATTTCAAGGCC
AGGCATGGTTGCTCACACCTTTAGTCCCAGCCTTTGGGAGGCTGAGCCAGGTGGATCACT
TGGGCCCAGGAGTTCAAGGCTGCCAGTGAGCCAAGATTGTGCCACTACTCTCCAGGCTGGG
CAACAGAGCAAGACCTGTCTCAGGGGGAACAAAAAGTTAATTTAGATTGTTTAAAGTG
CTGTAAGGAAGTAAATAGCTTGATAATCAAGAGAGCACCTGAAGGCCAGGCGTGGTGGC
TCACGCTGTGGTCTAACGCTTTGGGAAGCCCGAGCGGGCGGATCACAAAGGTCAGGAGAA
TTTTGGCCAGGCATGGTG

13736.1

AGAATCCATTATTTGGGTTTTAACTAGTTACACAACCTGAAATCAGTTTGGCACTACTTTA
TACAGGGATTACGGCTGTGTATCCCGACACTTAAATACTGTACCAGGACCACTGCTGTGCT
TAGGTCTGTATTCACTCATTACCATGTACATACTAAAAATATACTGTAGTGTCTCTTTAA
GGAAGACTGTACAGCGGTGTGTGCAAGATGACATTCACCAATTTGTGAATTAATTTCAACCC
AGAAGATACCTTTCACTCTATAAACTTGTATAGGCAAAATGTGGTGTAGCATTTGAGAG
ATGCACACAAAAATGTTACATAAAAGTTGAGACATTTCTAATGATAAGTGAAGTCAAAAAA
AAAAAAACCCACATCTCAAATTTGTAAAGATAAAGAAAAATAATTTAAAAACACAAA
AAATGGCATTCACTGGGTACAAAGCC

13737.1&2

CAAATATTTAATATAAATCTTTGAAACAAAGTTGACAGKGAATAAAAATCAAAGTTTGCAA
AAACGTGAAGATTAACTTAATTTGTCAAAATATCTCTCAATGCCCCAAATCAGTAATTTTTTA
TTTCTATGCAAAAGTATGCCCTTCAAACCTCTTAAATGATATATGATATGATACACAAACCA
GTTTTCAAAATAGTAAAGCCAGTCACTTTGCAATTTGTAAGAAATAGGTAAGGATTATAAG
ACACCTTACACACACACACACACACACACACACAGTGTGTCACGCCAATGACAAAAAAC
AATTTGGCCTCTCCTAAAAATAAGAACATGAAGACCCTTAATTTGCTGCCAGGAGGGAACAC
TGTGTACCCCTCCCTACAAATCCAGGTACTTTCTTTAATCCAATAGCAAATCTGGGCATAT
TTGAGAGGAGTGAATTTGACAGCCACSGTTGAAATCCTGTGGGGAACCATTCATGTGCCACC
CACTGGTGGCCTGAAAAATGCCAATAATTTTTCGCTCCCACTTCTGCTGCTGTCTCTTCCA
CATCCTCACATAGACCCCGAGACCCGCTGGCCCTGGCTGGGCAATGCCATTGCTGGTAGAGC
AAGTCATAGGTCTGTCTTTGACGTCACAGAAGCGATACACCAAATGCTGTGGTCAAT
TGTCATAACCAG

FIG. 1N

13738.1

TTTGACTTTAGTAGGGGTCTGAACTATTTATTTTACTTTGCCMGTAAATTTARACCYTATA
TATCTTTTCATTATGCCATCTTATCTTCTAATGBCAAGGGGAACAGWTGCTAAMCTGGCTTCT
GCATTWATCACATTTAAAAATGGCTTTCTTGGAAAAATCTTCTTGATATGAATAAAGGATCTT
TTAVAGCCATCATTTAAAGCMGGNTTCTCTCCAACACGAGTCTGCTASGGGGGGGKGAGCT
GTGAACTCTGGCTGAAGGCTTTCCCATACACACTGCAATGACMTGGTTTCTGACCAGBGTG
AGTTA

13738.2

AGAGAAGCCCCATAAATGCAATCAGTGTGGGAAGGCCTTCAGTCAGAGCTCAAGCCTTTT
CCTCCATCATCGGGTTCATACTGGAGAGAAACCCTATGTATGTAATGAATGCCGCAGAGCC
TTTGGTTTTAACTCTCATCTTACTGAACACGTAAGGATTACACACAGGAGAAAAACCCTATG
TTTGTAAATGAGTGGCGCAAGCCCTTTCGTGGAGTTCCACTCTTGTTCAGCATCGAAGAGT
TCACACTGGGGAGAAAGCCCTACCAGTGGTGAATGTGGGAAAGCTTTCAGCCAGAGCTC
CCAGCTCACCTACATCAGCCGAGTTCACACTGGAGAGAAGCCCTATGACTGTGGTGACTG
TGGGAAGGCCTTCAGCCGGAGGTCAACCCTCATTACAGCATCAGAAAGTTACAGCGGAGA
GACTCGTAAGTGCAGAAAACATGGTCCAGCCTTTGTTCATGGCTCCAGCCTCACAGCAGAT
GGACAGATTCCCCTGGAGAGAAGCAGCGCAGAACCCTTAACCATGGTGCAAAATCTCATT
CTGGCTGGACAGTTC

13739.1&2

GAGACAGGCTCTCACTTTGTGACCCAGGCTGGAATGSCAGTGGTGGGATCTTACGTACCTCA
CTGCAGCCCTGACCTCTCTGCACTCAAAACAAATCTCTGCTCAGCCCTGCAAGTAGCTGGG
ACTGTGGGTGCATGCCACCATGGCTGCTAACTTTGTAGTTTTGTAAAGATGGGGTTTTT
GCCATGTTGCACATCCTGCTGCTGAACCTCTGAGCTCAAACGATCTGCCCCACCTCGGCCTC
CCAGAATGTTGGGATTACAGGGGTAAACCACGCGCTGGCCCCATTAGGGGTATCTTAGC
ATCCACTTGCTCACTGAGATTAATCATAGAGATGATAACCACTGGAAGAAAAAATTTTT
ACTAGCCTTTGGATATTTTTCTTTTCAGCTTTATACAGAGGATTGGATCTTTAGTTTTT
CTTTAACTGATAAATAAAACAATGAAGGAAATAAGTTTACCTGAGATTACAGAGATAAC
CGGCATCACTCCCTTGCTCAAATCCAGTCTTTACGACATCAATTAATTTTACAGAGGTGCAGGA
TAAAGCCCTTTAGTCTGCTTTGGCAGTTTTCTTCCACTTTTTGTAAACCTGTTGCCTGACA
AATGGAATTGACAGCGTATGCCATGACTATCCATTTGTACGCCATACGCTGTCAATTTTT
CCACCAATCCCTTGCTCTCTTTGGAGAGATCTTTATCAGCTAGTCTTTGGCAAAAGTA
ATTGCAACTTCTTCTAGGTATCTATTTGTCCGTTCCACTGCTGGAACCCCTGGGACCAGGA
CTAAAACCTCCAG

13741.1

ATCTCATATATATATTTCTTCTGACTTTATTTGCTTGGTTCTGNCACGCCATTTAAAAATATC
ACAGAGACCAAAATAGAGCGGCTTCTGCTGGAAACGATGGCAGTCACAGGACAAAAATAC
AAAACCTAGGGGGCTCTGTCTTCTCATACATCAATTTTCAAGTATTTTTTTATGTACA
AAGAGCTACTCTATCTGAAAAAAAATTAATAAATAAATGAGACAAATAGTTTATGCATC
CTAGGAAGAAAGATGGGAAGAAAGAACCGGGGACITGGGTACAAATTCCTGTCCCTGT
TCCCAGGGACCACTACCTTCTGCACTGAGTTCCCCACAGCCTCACCCATCATGTACACA
GGCAAGTGCCAGGGTAGCTGGGGACAGTGGAGACAGGAACCAACATACTTTGGC
CTGGAAGATAAGGAGAAAGTCTCAGAAACACACTGGTGGGAAGCAATCCCACNGCCCGT
GCCCCANGAGCTTCCCACCTGCTGCTGCTTCCCTGGGTGGCTTTGGGAACAGCTTGGGCAG
GCCCTTTGGGTGGGGNCCAACCTGGCCCTTTGGGCCCCGTGTGGAAG

FIG. 10

13742.1

AAACATTGAGATGGAATGATAGGGTTTCCCAGAATCAGGTCCATATTTTAACTAAATGAA
AATTATGATTTATAGCCTTCTCAAATACCTGCCATACTTGATATCTCAACCAGAGCTAATTT
TACCTCTTTACAAATTAATAAGCAAGTAACTGGATCCACAATTTATAATACCTGTCAATT
TTTTCTGTATTAACCTCTATCATAGTTTAAGCCTATTAGGGTACTTAATCCTTACAAATAA
ACAGGTTTAAAAATCACCTCAATAGGCAACTGCCCTTCTGGTTTTCTTTTGAATAACAAT
CTGAATGCTTAAGATTTTTCCACTTTGGGTGCTAGCAGTACACAGTGTTACACTCTGTATTCC
AGACTTCTTAAATTATAGAAAAAGGAATGTACACTTTTTGTATTCTTTCTGAGCAGGGCCG
GGAGGCAACATCATCTACCATGGTAGGGACTTGTATGCATGGACTACTTTA

14351.1

ACTCTGTGCGCCAGGCTGGAGCCCBTGGMCGGATCTCGACTCCCTGCAAGCTMCGCCTC
ACAGGWTGATGCCATTCTCTGCTCAGCATCTGGAGTAGCTGGGACTACAGGCGCCAGC
CACCATGCCCAGCTAATTTTT

14351.2

ACCTTAAAGACATAGGAGAAATTAATACTGGGAGAGAAAGCTTACAAATGTAAGGTTTCTG
ACAAGACTTGGGAGTGATTCACACCTGGAAACAACATACTGGACTTCACACTGGABAGAAA
CCTTACAAGTGTAATGAGTGTGGCAAGGCTTTGGCAAGCAGTCAACACTTATTCACCATC
AGGCAATTCA

14354.2

AGTCAGGATCATGATGGCTCAGTTTCCACAGCGATGAATGGAGGGCCAAATATGTGGGC
TATTACATCTGAAGAACCTACTAAGCATGATAAACAGTTTGATAACCTCAAACCTTCAGGA
GGTTACATAACAGGTGATCAAGCCCTACTTTTCTACAGTCAGGTCTGCCGGCCCCCGG
TTTTAGCTGAAATATGGGCCCTATCAGATCTGAACAAGGATGGGAAGATGGACCAGCAAG
AGTTCTCTATAGCTATGAAACTCATCAAGTTAAAGTTGCAGGGCCAAACAGCTCCCTGTAGT
CCTCCCTCCTATCATGAAACAACCCCTATGTTCTCTCCACTAATCTCTGCTCGTTTTGGGA
TGGGAAGCATGCCCAATCTGTCCAATCATCAGCCATTGCCCTCCAGTTGCACCTATAGCAAC
ACCCTTGTCTTCTGCTACTTCAGGGACCAGTATTCCTCCCTAATGATGCCCTCT

14354.1

CTTTCGATTTCTTCAATTTCTCAGCTTTCAATTAATGAAGTTGTTCAAGGGCTAACTGCTG
TGTAATTATAGCTTTCTCTGAGTTCTTCAGCTGATTTGTTAAATGAATCCATTCTGAGAGCT
TAGATGCAGTTTCTTTTCAAGAGCATCTAATTTGTTCTTTAAGTCTTTGGCATAATTCTTCC
TTTTCTGATGACTTTCTATGAAGTAAACTGATCCCTGAATCAGGTGTGTTACTGAGCTGCAT
GTTTTTAATTTCTTTGTTTAAATACCTGCTTCTCAGGGACCAGATAGATAAGCTTATTTTGAT
ATTCTTAAAGCTCTTGGTGAAGTTGTTCAATTCATAATTTCCAGGTCACACTGGTTATCC
CAAACCTCT

FIG. 1P

16431.1.2

GTGGAGGTGAAACGGAGGCCAAGAAAGGGGGCTACCTCAGGAGCGAGGGACAAAGGGGGC
GTGAGGCACCTAGGCCGCGGCACCCCGCGACAGGAAGCCGTCTGAACCGGGCTACCGG
GTAGGGGAAGGGCCCGCGTAGTCCTCGCAGGGCCCCAGAGCTGGAGTCGGCTCCACAGCC
CCGGGCGCGTCGGCTTCTCACTTCCTGGACCTCCCCGGCGCCCCGGCCTGAGGACTGGCTCG
GCGGAGGGAGAAGAGGAAACAGACTTGAGCAGCTCCCCGTTGTCTCGCAACTCCACTGCC
GAGGAACCTCATTTCTTCCCTCGCTCCTTACCCCCACCTCATGTAGAAAGGTGCTGAA
GCGTCCGGAGGGAAGAAGAACCTGGGCTACCGTCTGGCCTTCCCMCCCCCTTCCCGGGG
CGCTTTGGTGGGCGTGGAGTTGGGGTTGGGGGGTGGGTGGGGGTTCTTTTTTGGAGTGCT
GGGGAACCTTTTTTCCCTTCTTCAGGTGAGGGGAAAGGGAATGCCCAATTCAGAGAGACAT
GGGGGCAAGAAGGACGGGAGTGGAGGAGCTTCTGGAACCTTTCAGCCGTCATCGGGAGG
CGGCAGCTCTAACAGCAGAGAGCGTCAACGCTTGGTATCGAAGCACAAGCGGCATAAGTC
CAAACACTCCAAAGACATGGGGTTGGTGACCCCCGAAGCAGCATCCCTGGGCACAGTTAT
CAAACCTTTGGTGGAGTATGATGATATCAGCTCTGATTCCGACACCTTCTCCGATGACATG
GCCTTCAAACCTAGACCGAAGGGAAGGACGAACGTCGTTGGATCAGATCGGAGCGACCGC
CTGCACAAACATCGTCAACCACAGCACAGGCGTCCCCGGGACTTACTAAAAGCTAAACAG
ACCG

16432-1

GACATGTTTCCCTGCAGGGGACCAGACACAATGGGATTAGCCAGTGCTCACTGTTCTTTAT
GCTTCCAGAGAGGATGGGGACAGCTCTCAGGTGAGAATCCAGGCTGAGAAGGCCATGCTG
GTTGGGGCCCCCGGAAGCAGCGTCCGATCCTCCCTGGCATCAGCGTAGACCCGCTGCTC
AGGCTTGGGGTACCAAACTCATGCTCTGTACTGTTTTGGCCCCATGCGGTGAGAGGAAAAC
CTAGAAAAGATTGCTCGTCTAAGGAATCAGCTGCCCCCTCATCCTCCGCAATCCAAATGCT
GGTGACAACATAATCCCTCTCCAGGACACAGACTCGGTGACTCCACACTGGGCTGAGTGG
CCTCTGGAGGCTCGTGGCCTAAGGCAAGGCTCCGTAAGGCTGATCGGCTGAACTGGGTGG
GGTCAGGGTTTTCTGACCCTTCCCTTCCCATCCCATAAACCGCTGTCAATGAGCTCACACTGT
GGTCA

16432-2

GATGGCATGGTCGTTGCTAAATGTGCTCTGCTGGGATGGAGCACTTCTCTCTGTGAGCCCAGG
GGACCCGCTGTCCCTGGAGCTTGGGGCAAGGAGGGAAGAGTGATACCAGGAAGGTGGG
GCTGCAGCCAGGGGCCAGAGTTCAGGCACTGCTCTCCGCCCCCTCAAAGCTCCTCCG
GGGACTGCTCAGGAGTGATGGTGCCCTGGAGTTTGGCCCCAACTTCCCTGGCCACCCTGGAA
GGTGCTTGGCTGCTCCAGGCTCTAGGCTGGGCTGATGGGTTTCTCCAGGACACAAGTATC
ATTAAAGCCACCCTCTCTCAGCTTGTGAGGCCGACATGTGGGACAGGCTGTGCTCACAA
CCCCCTGGCCTCCCTGCCCTCCATCAGGAGGAGCCAGTGGAACCTTCCGAAAGCTCCCAG
CATCTCAGCAGCCCTCAAAGTGTCTCTGGGCAAGCTCTGCTCTCTGACTGGAGGTCA
TCTGGGCTTGGCCTGCTCTCTCTCC

17184.3

TAAAAAAGTGTAACAAAGGTTTATTAGACTTTCTTCATGCCCCCAGATCCAGGATGTCTA
TGTAACCGTTATCTTACAAAGAAAGCACAATATTGGTATAAACTAAGTCAGTCACTTGC
TAACTGAAATAGCGTCCATCCAAAGTGGGTTTAAAGGTAAACTACCTGACGATATTGGC
GGGGATCCTGAGTTTGGACTGCTTCCCGGTTTGTCCAGGCTTCCGGGTCTGTTCTTGGC
ACTCATGGGACAGGCATCCTGCTCTGTGGGGCCCCGCTGGAGCCCTTACGTGAAGCT
GAAGGTATCCACCSTAGGGGGCTCTAGGCGAGTGGACCTTCATCCGGAACATAACAAGGG
TCGGGGACAGCCCTCTTGGCTATGTCCG

FIG. 1Q

17184.4

CAAGCGTTCCCTTTATGGATGTAAATTC.AAACAGTCATGCTGAGCCATCCCCGGGCTGACAGT
CACGTTWAAGACACTAGGTCCGGCCGCCACAGTGCCACCCAAGGAGAAGAAGAAATTTGGA
ATTTTCCATGAAGATGTACGGAAATCTGATGTTGAATATGAAAATGGCCCCAAATGGAA
TTCC.AAAAGGTTACCACAGGGGCTGTAAGACCTAGTGACCCTCCTAAGTGGGAAGAGGA
ATGGAGAATAGTATTTCTGATGCATCAAGAACATCAGAAATATAAACTGAGATCATAATG
AAGGAAAAATCCATATCCAATATGAGTTTACTCAGAGACAGTAGAACTATTCCCAGG

17185.1

TAGGAATAACAAATGTTTATTCAGAAATGGATAAGTAATACATAATCACCTTCATCTCTT
AATGCCCTTCTCTCTCTCTGACAGGAGACACAGATGGGTAAACATAGAGGCATGGGAA
GTGGAGGAGGACACAGGACTAGCCCCACCTTCTCTTCCCGGTCTCCAAGATGACTGCT
TATAGAGTGGAGGAGGCAACAGGTCCCCCTCAATGTACCAGATGGTCACCTATAGCACCA
GCTCCAGATGGCCACGTGGTTCCAGCTGGACTCAATGAACTCTGTGACAACCAGAAGAT
ACCTGCTTTGGGATGAGAGGGAGGATAAAGCCATGCAGGGAGGATATTTACCATCCCTAC
CCTAAGCACAGTGCAAGCAGTGAGCCCCCGGCTCCAGTACCTGAAAAACCAAGGCCTAC
TGNCTTTTGGATGCTCTCTTGGGCCACG

17188.2

AAGCCTCCTGCCCTGGAAATCTGGAGCCCCCTGGAGCTGAGCTGGACCGGGCAGGGAGGG
GCTGAGAGGCAAGACCGTCTCCCTCTCTCTGACCTGCTTCCCCAGCAGCCACTGCTGGGC
ACACCAGAAACGCCAGCAGAGAAATGGGAGCGGAGAGTCTTAGCCCTGGAGCTGAGG
CTGCCTCTGGGCTGACCCGCTGCTCTACGTGGCCAGAACTGGCGTGGCATCTGCCATCC
ATTTGAGGCCAGGGTGGAGCAAGGGAGGCCAAGCAGAGGAAACCTATTCCTGCTGTGAC
AACACAGCCCTTGTCCACGCCAGCCTAAGTGCAGGGAGCGTGATGAAGTCAGGCAGCCAG
TCGGGGAGGACGAGGTAATCAGCAGCAATGTCACCTTGTAGCCTATGCGCTCAATGGCC
CGGAGGGGCCAGCAACCCCCCGGCACAGCTCAGCCAAACAGCAGTGCCTCTGCAGGCACCAAG
AGAGCGATCATGGACTTGAGCCCCCTGTTT

17190.1

GTTTGGCAGAAGACATGTTAAATAACAATTCATATTTAAAAATACAGCAACAATTCCTCT
ATCTGTCCACCATCTTGGCTTCCCTTCCCTGGGGCTGAGGCAGACAAAGGAAGGTAATGA
GGTTAGGGCCCCCAGCCGGGCTAAGTGCTATTGGCCTGCTCCTGCTCAAAGAGAGCCATA
GCCAGCTGGGCACGGCCCCCTAGCCCCCTCAGGTTGCTGAGCCGGCAGCGGTGGTAGAGT
TCTTCACTCAGCCGTGGGCTCCAGTCTCTCCAGGGAGA.ACTTCTGCACCAGCCCTGCTCTA
CGCCCEGAAGAGGTCCAGCCCTGAGAACCGGAGGAAACATCCATCACCTCCAGCCCCCT
CCAGGGCTTCTCTCTCTCTCTGCGCTGCCAGTTCACTTCCAGCCGGGCTCGGGCCGCCAG
GTAATCAGCGTTGTAGAAGCAGCCCTCCGAGAAAGCCTGCCCGTCAAACTCTCCCCGCTATA
GGAGCCCCCCCCGGGAGGGGTACCAACC

FIG. 1R

17190.2

CAAGTTGAACGTCAGGCTTGGCAGAGGTGGAGTGTAGATGAAAACAAAGGTGTGATTATG
AAGAGGATGTGAGTCCTTTGGGTGTAGGAGAGAAAGGCTGTTGAGCTTCTATTTCAAGAT
ACTTTTACCTGTGCAAAAAGCACATTTTCCACCTCCTTCTCATGGCATTGTGTAAAGGTGAG
TATGATTCTTATTCATCTGCATTTTAGAGGTGAAGAATAACGTACAAGGGATTCAAGTGAT
TAGCAAGGGACCCCTCACTAAGTGTTGATGGAGTTAGGACAGAGCTCAGCTGTTTGAATCT
CAGAGCCCAGGCAGCTGGAGCTGGGTAGGATCCTGGAGCTGGCACTAATGTGAGGTGCAT
TCCCTCCAACCCAGGCTCAGATCCGGAACCTGACCGTGCTGACCCCCGAAGGGGAGGCAG
GGCTGAGCTGGCCCGTTGGGCTCCCTGCTCCTTTACACCACACTCTCGCTTTGAGGTGCTG
GGCTGGGACTACTTCACAGAGCAGC

17191.2&89.2

TGGCCTGGGCAGGATTGGGAGAGAGGTAGCTACCCGGATGCAGTCCTTTGGGATGAAGAC
TATAGGGTATGACCCCATCATTTCCCCAGAGGTCTCGGCCTCCTTTGGTGTTGAGCAGCTG
CCCCTGGAGGAGATCTGGCCTCTCTGTGATTTCACTGTGCACACTCCTCTCCTGCCCTC
CACGACAGGCTTGCTGAATGACAACACCTTTGCCAGTGCAAGAAGGGGGTGCGTGTGGT
GAACTGTGCCCCGTGGAGGGATCGTGGACGAAGGCGCCCTGCTCCGGGGCCCTGCAGTCTGG
CCAGTGTGCCGGGGCTGCACTGGACGTGTTTACGGAAGAGCCGCCACGGGACCGGGCCTT
GGTGGACCATGAGAAATGTCATCAGCTGTCCCCACCTGGGTGCCAGCACCAAGGAGGCTCA
GAGCCGCTGTGGGGAGGAAATTGCTGTTCAAGTTCGTGGACATGGTGAAAGGGGAAATCTCT
CACCGGGGTTGTGAATGCCCAGGCCCTT

FIG. 1S

AGCCAGATGGCTGAGAGCTGCAAGAAGAAGTCAGGATCATGATGGCTCAGTTTCCACAG
CGATGAATGGAGGGCCAAATATGTGGGCTATTACATCTGAAGAACGTACTAAGCATGATA
AACAGTTTGATAACCTCAAACTTCAGGAGGTTACATAACAGGTGATCAAGCCCGTACTTT
TTTCCTACAGTCAGGTCTGCCGGCCCCGGTTTTAGCTGAAATATGGGCCTTATCAGATCTG
AACAAGGATGGGAAGATGGACCAGCAAGAGTTCTCTATAGCTATGAAACTCATCAAGTTA
AAGTTGCAGGGCCAACAGCTGCCTGTAGTCTCCCTCCTATCATGAAACAACCCCTATGT
TCTCTCCACTAATCTCTGCTCGTTTTGGGATGGGAAGCATGCCCAATCTGTCCATTTCAG
CCAATTGCCTCCAGTTGCACCTATAGCAACACCCCTTGTCTTCTGCTACTTCAGGGACCAGTAT
TCCTCCCCTAATGATGCCTGCTCCCCTAGTGCCTTCTGTTAGTACATCCTCATTACCAAATG
GAACTGCCAGTCTCATTACGCCCTTTATCCATTCTTATTCTTCTCAACATTGCCTCATGCA
TCATCTTACAGCTGATGATGGGAGGATTTGGTGGTGCTAGTATCCAGAAGGCCCCAGTCTC
TGATTGATTTAGGATCTAGTAGCTCAACTTCTCAACTGCTTCCCTCTCAGGGAACCTCACCT
AAGACAGGGACCTCAGAGTGGGCAGTTCTCAGCCTTCAAGATTAAGTATCGGCAAAAA
TTTAATAGTCTAGACAAAGGCATGAGCGGATACCTCTCAGGTTTTCAAGCTAGAAATGCCC
TTCTTCAGTCAAATCTCTCTCAAACCTCAGCTAGCTACTATTTGGACTCTGGCTGACATCGAT
GGTGACGGACAGTTGAAAGCTGAAGAATTTATTCTGGCGATGCACCTCACTGACATGGCC
AAAGCTGGACAGCCACTACCACTGACGTTGCCTCCCGAGCTTGTCCCTCCATCTTTCAGAG
GGGGAAGCAAGTTGATTCTGTAAATGGAACCTCTGCCCTTCATATCAGAAAAACACAAGAAG
AAGAGCCTCAGAAGAACTGCCAGTTACTTTTGAGGACAAACGGAAAGCCAACTATGAAC
GAGGAACAATGGAGCTGGAGAAGCGACGCCAAGTGTTGATGGAGCAGCAGCAGAGGGAG
GCTGAACGCCAAAGCCCAGAAAGACAAGGAAGAGTGGGAGCGGAAACACAGAGAACTGC
AAGAGCAAGAATGGAAGAAGCAGCTCGAGTTGGAGAAACGCTTGGAGAAACAGAGAGAG
CTGGAGAGACAGCGCGAGGAAGAGAGCGAGAAAGGAGATAGAAAGACGAGAGGCAGCAA
AACAGGACCTTCAGAGACAACCGCGTTTTAGAATGGGAAGACTCCGTCGGCAGGAGCTGC
TCAGTCAGAAGACCAGCGAACAAGAACACATTGTACGGCTGACCTCCAGAAAGAAAAGT
CTCCACCTGGAAGCTGGAAGCAGTGAATGGAAAACATCAGCAGATCTCAGGCAGACTACAA
GATGTCCAAATCAGAAAGCAAAACAAAAGACTGAGCTAGAAGTTTGGATAAACAGTGT
GACCTGGAATTTATGGAATCAAAACAACTTCAACAAGAGCTTAAGGAATATCAAAATAAG
CTTATCTATCTGGTCCCTCAGAACGAGCTATTAAACGAAAGAAATTAACAAATGCAGCTCA
GTAACACACCTGATTACGGGATCAGTTTACTTTCATAAAAAATCATCAGAAAAGCAAGAAAT
TATGCCAAAGACTTAAGAAACAAATACATGCTCTTGAATAAGAACTGCATCTAAGCTCT
CAGAAATGGATTCAATTAACAAATCAGCTGAAGCAACTCAGAGAAAGCTATAATACACAGC
AGTTAGCCCTTGAACAACTTCAAAAAACGCTGACAAAATTGAAGGAATCGAAAGAA
AAAGATTAGACC.AAAAAAAAAAAAAA

FIG. 2A

ATGGCAGTGACATTCACCATCATGGGAACCACCTTCCCTTTTCTTCAGGATTCTCTGTAGTG
GAAGAGAGCACCCAGTGTTGGGCTGAAAACATCTGAAAGTAGGGAGAAGAACCTAAAAAT
AATCAGTATCTCAGAGGGCTCTAAGGTGCCAAGAAGTCTCACTGGACATTTAAGTGCCAA
CAAAGGCATACTTTTCGGAATCGCCAAGTCAAAACTTTCTAACTTCTGTCTCTCTCAGAGAC
AAGTGAGACTCAAGAGTCTACTGCTTTAGTGGCAACTACAGAAAACCTGGTGTTACCCAGA
AAAACAGGAGCAATTAGAAAATGGTTCCAATATTTCAAAGCTCCGCAAACAGGATGTGCTT
TCCTTTGCCCATTTAGGGTTTCTTCTTTTCTTTCTTTTATTAACCACTA

FIG. 2B

ATATCTAGAAGTCTGGAGTGAGCAAAACAAGAGCAAGAAACAAAAAGAAGCCAAAAGCAG
AAGGCTCCAATATGAACAAGATAAAATCTATCTTCAAAGACATATTAGAAGTTGGGAAAAT
AATTCATGTGAACTAGACAAGTGTGTTAAGAGTGATAAGTAAATGCACGTGGAGACAAG
TGCATCCCCAGATCTCAGGGACCTCCCCCTGCCTGTCACCTGGGGAGTGAGAGGACAGGAT
AGTGCAATGTTCTTTGTCTCTGAAATTTTATGTTATATGTGCTGTAATGTTGCTCTGAGGAAGC
CCCTGGAAAAGTCTATCCCAACATATCCACATCTTATATTCCACAAATTAAGCTGTAGTATG
TACCCTAAGACGCTGCTAATTGACTGCCACTTCGCAACTCAGGGGCGGCTGCATTTTAGTA
ATGGGTCAAATGATTCACTTTTTATGATGCTTCCAAAGGTGCCTTGGCTTCTCTTCCCAACT
GACAAATGCCAAAGTTGAGAAAAATGATCATAATTTTAGCATAAACAGAGCAGTCGGCGA
CACCGATTTTATAAATAAACTGAGCACCTTCTTTTAAACAAACAAATGCGGGTTTATTTCT
CAGATGATGTTTCATCCGTGAATGGTCCAGGGAAGGACCTTTCACCTTGACTATAATGGCATT
ATGTCATCACAAGCTCTGAGGCTTCTCCTTTCCATCCTGCGTGGACAGCTAAGACCTCAGT
TTTCAATAGCATCTAGAGCAGTGGGACTCAGCTGGGGTGATTTCCGCCCCCATCTCCGGGG
GAATGTCTGAAGACAATTTTGTACCTCAATGAGGGAGTGGAGGAGGATACAGTGCTACT
ACCAACTAGTGGATAAAGGCCAGGGATGCTGCTCAACCTCCTACCATGTACAGGACGTCTC
CCCATTACAACCTACCCAAATCCGAAGTGTCAACTGTGTCAGGACTAAGAAACCCTGGTTTTG
AGTAGAAAAGGGCCTGGAAAAGAGGGGAGCCAACAAATCTGTCTGCTTCTCACATTAGTC
ATTGGCAAATAAGCATTCTGTCTCTTTGGCTGCTGCCTCAGCACAGAGAGCCAGAACTCTA
TCGGGCACCAGGATAACATCTCTCAGTGAACAGAGTTGACAAGGCCTATGGGAAATGCCT
GATGGGATTATCTTCAGCTTGTGAGCTTCTAAGTTTCTTCCCTTCATTCTACCCTGCAAG
CCAAGTTCTGTAAAGAGAAATGCCTGAGTTCTAGCTCAGGTTTTCTTACTCTGAATTTAGATC
TCCAGACCTTCTGCTGCCACAATTCAAATTAAGGCAACAAACATATACCTTCCATGAAGCA
CACACAGACTTTTGAAAGCAAGGACAATGACTGCTTGAATTGAGGCCTTGAGGAATGAAG
CTTTGAAGGAAAAGAATACTTTGTTTCCAGCCCCCTTCCCACTCTTCATGTGTTAACCAC
TGCCTTCTGGACCTTGGAGCCACGGTGACTGTATTACATGTTGTTATAGAAAAGTGAATTT
AGAGTTCTGATCGTTCAAGAGAAATGATTAAATATACATTTCTA

FIG. 2C

TCGAGCGGCCGCCCCGGGCAGGTCCTTCAGACTTGGACTGTGTCACACTGCCAGGCTTCCAG
GGCTCCAACCTTGCAGACGGCCTGTTGTGGGACAGTCTCTGTAATCGCGAAAGCAACCATG
GAAGACCTGGGGGAAAACACCATGGTTTTATCCACCCTGAGATCTTTGAACAACCTTCATCT
CTCAGCGTGCGGAGGGAGGCTCTGGACTGGATATTTCTACCTCGGCCGCGACCACGCT

FIG. 4

TAGCGYGGTCGCGGCCGAGGYCTGCTTYTCTGTCCAGCCCAGGGCCTGTGGGGTCAGGGC
GGTGGGTGCAGATGGCATCCACTCCGGTGGCTTCCCCATCTTTCTCTGGCCTGAGCAAGGT
CAGCCTGCAGCCAGAGTACAGAGGGCC.AACACTGGTGTTCTTGAACAAGGGCCTTAGCAG
GCCCTGAAGGRCCTCTCTGTAGTGTTGAACTTCCTGGAGCCAGGCCACATGTTCTCCTCAT
ACCGCAGGYTAGYGATGGTGAAGTTGAGGGTGAAATAGTATTMANGRAGATGGCTGGCA
RACCTGCCCCGGCGGCCGCTCSAAATCC

FIG. 5

AGCGTGGTCGCGGCCGAGGTGTCCTTCAGGGTCTGCTTATGCCCTTGTTCAAGAACACCAG
TGTCACTCTCTGTACTCTGGTTGCAGACTGACCTTGCTCAGGCCTGAGAAGGATGGGGCA
GCCACCAGAGTGGATGCTGTCTGCACCCATCGTCCTGACCCCAAAAGCCCTGGACTGGACA
GAGAGCGGCTGTACTGGAAGCTGAGCCAGCTGACCCACGGCATCACTGAGCTGGGCCCCCT
ACACCCTGGACAGGGACAGTCTCTATGTCAATGGTTTCACCCATCGGAGCTCTGTACCCAC
CACCAGCACCGGGGTGGTCAGCGAGGAGCCATTCAACCTGCCCCGGGCGGCCGCTCGA

FIG. 6

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A

TTGGGGNTTTMGAGCGGGCCGCCGGGCAGGTACCGGGGTGGTCAGCGAGGAGCCATTAC
ACTGAACTTCACCATCAACAACCTGCCGTATGAGGAGAACATGCAGCACCCCTGGCTCCAG
GAAGTTCAACACCACGGAGAGGGTCCTTCAGGGCCTGCTCAGGTCCCTGTTCAAGAGCAC
CAGTGTITGGCCTCTGTACTCTGGCTGCAGACTGACTTTGCTCAGACTTGAGAAACATGGG
GCAGCCACTGGAGTGGACGCCATCTGCACCCTCCGCCTTGATCCCACTGGTCCTGGACTGG
ACAGAGAGCGGCTATACTGGGAGCTGAGCCAGTCCTCTGGCGGNGACNCCNCTT

B

AGCGTGGTCGCGGGCCGAGGTCCAGTCCGAGCATGCTCTTTCTCCTGCCCCACTGGCACAGTG
AGGAAGATCTCTGCTGTCAGTGAGAAGGCTGTATCCACTGAGATGGCAGTCAAAAGTGC
ATTTAATACACCTAACGTATCGAACATCATAGCTTGGCCCAGGTTATCTCATATGTGCTCA
GAACACTTACAATAGCCTGCAGACCTCCCCGGGCGGCGGCTCGA

FIG. 7A and 7B

TGTGGTGTGAACTTCCTGGAGNCAGGGTGACCCATGTCCTCCCCATACTGCAGGTTGGTG
ATGGTGAAGTTGAGGGTGAATGGTACCAGGAGAGGGCCAGCAGCCATAATTGTSGRGCKG
SMGMSSGAGGMWGGWGTYYCWGAGGTTCYRARRTCCACTGTGGAGGTCCCAGGAGTGCT
GGTGGTGGGGACAGAGSTCYGATGGGTGAAACCATTGACATAGAGACTGTTCTGTCCAG
GGTGTAGGGGCCCAGCTCTTYRATGYCATTGGYCAGTTKGCTYAGCTCCCAGTACAGCCRC
TCTCKGYYGMGWCCAGSGCTTTTGGGGTCAAGATGATGGATGCAGATGGCATCCACTCCA
GTGGCTGCTCCATCCTTCTCGGACCTGAGAGAGGTCAGTCTGCAGCCAGAGTACAGAGGG
CCAACACTGGTGTTCCTTTGAATA

FIG. 8

TCGAGCGGCCGCCCGGGCAGGTCAGGAAGCACATTGGTCTTAGAGCCACTGCCTCCTGGA
TTCCACCTGTGCTGCCGACATCTCCAGGGAGTGCAGAAGGGAAGCAGGTCAAAGTCTCA
GATCAGTCAGACTGGCTGTTCTCAGTTCTCACCTGAGCAAGGTCAGTCTGCAGCCAGAGTA
CAGAGGGCCAACACTGGTGTCTTGAACAAGGGCTTGAGCAGACCCTGCAGAACCCTCTTC
CGTGGTGTGAACTTCCTGGAACCAGGGTGTTCATGTTTTCTCATAATGCAAGGTTG
GTGATGG

FIG. 9

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Gene Name	Bal Probe '1' Exp Name	P1	P2	Probe 2 Name	GEN ID	Probe1 Value	Probe2 Value	Probe1		Probe2	
								B/B	%	B/B	%
42100188 (D3)	17.0 705A Ovary T	17.0 705A Ovary T	17.0 705A Ovary T	705A Liver N	42100646	8620	1240	57.7	65	2.2	65
42100188 (D3)	18.9 524 Ovary Tumor	18.9 524 Ovary Tumor	18.9 524 Ovary Tumor	524 Spinal Cord N	42100628	5894	1002	35.3	89	3.9	89
42100188 (D3)	18.7 485A Ovary T	18.7 485A Ovary T	18.7 485A Ovary T	591 Fetal tissue	42100647	12151	2124	54.3	71	2.8	71
42100188 (D3)	18.1 426A Ovary T (tunc)	18.1 426A Ovary T (tunc)	18.1 426A Ovary T (tunc)	415A Aorta N	42100611	7487	1480	53.0	73	9.7	73
42100188 (D3)	18.5 261A Ovary Tumor	18.5 261A Ovary Tumor	18.5 261A Ovary Tumor	573 Heart H	42100623	7402	2116	39.2	84	4.5	84
42100188 (D3)	18.3 485A Ovary T (tunc)	18.3 485A Ovary T (tunc)	18.3 485A Ovary T (tunc)	11 Colon H	42100609	1714	1113	20.4	83	2.6	83
42100188 (D3)	18.0 913A Ovary T (tunc)	18.0 913A Ovary T (tunc)	18.0 913A Ovary T (tunc)	12 Skin H	42100641	2435	814	12.4	75	2.1	75
42100188 (D3)	18.6 485A Ovary T (tunc)	18.6 485A Ovary T (tunc)	18.6 485A Ovary T (tunc)	272A Dendritic cells	42100608	4578	1754	25.0	69	2.3	69
42100188 (D3)	18.2 261A Ovary Tumor	18.2 261A Ovary Tumor	18.2 261A Ovary Tumor	52 Pancreas N	42100609	7904	3506	18.5	81	5.6	81
42100188 (D3)	18.0 485A Ovary T	18.0 485A Ovary T	18.0 485A Ovary T	510 PBLR T (tunc)	42100605	2191	1081	14.0	90	2.9	90
42100188 (D3)	18.0 485A Ovary Tumor	18.0 485A Ovary Tumor	18.0 485A Ovary Tumor	110 Small intestine	42100604	1979	971	10.4	80	2.7	80
42100188 (D3)	18.0 485A Ovary Tumor	18.0 485A Ovary Tumor	18.0 485A Ovary Tumor	115 Heart H	42100624	1911	964	13.9	93	1.4	93
42100188 (D3)	18.0 485A Ovary Tumor	18.0 485A Ovary Tumor	18.0 485A Ovary Tumor	52 Ovary H	42100626	1666	817	9.8	100	1.0	100
42100188 (D3)	18.6 261A Ovary Tumor	18.6 261A Ovary Tumor	18.6 261A Ovary Tumor	245A Esophagus H	42100612	1827	3480	13.4	97	0.5	97
42100188 (D3)	18.6 261A Ovary T	18.6 261A Ovary T	18.6 261A Ovary T	510 Skeletal muscle	42100621	5914	3653	30.4	86	6.0	86
42100188 (D3)	18.6 522 Ovary Tumor	18.6 522 Ovary Tumor	18.6 522 Ovary Tumor	52 Ovary H	42100643	3049	1274	11.9	50	2.6	50
42100188 (D3)	18.4 913A Ovary T	18.4 913A Ovary T	18.4 913A Ovary T	119 Kidney H	42100627	4746	1072	11.0	92	4.0	92
42100188 (D3)	18.3 525 Ovary Tumor	18.3 525 Ovary Tumor	18.3 525 Ovary Tumor	913S P Ovary T (tunc)	42100602	4204	3074	23.0	93	7.7	93
42100188 (D3)	18.2 429A Ovary Tumor	18.2 429A Ovary Tumor	18.2 429A Ovary Tumor	111A Lung tissue	42100622	3002	2101	16.6	89	4.0	89
42100188 (D3)	18.2 485A Ovary T (tunc)	18.2 485A Ovary T (tunc)	18.2 485A Ovary T (tunc)	111 Bone Marrow	42100619	1643	1297	9.6	90	3.1	90
42100188 (D3)	18.2 288A Ovary T	18.2 288A Ovary T	18.2 288A Ovary T	161A Ovary H	42100614	2521	2084	22.0	65	24.9	65
42100188 (D3)	18.1 201A Ovary Tumor	18.1 201A Ovary Tumor	18.1 201A Ovary Tumor	119 Brain H	42100640	2072	1663	10.9	88	2.3	88
42100188 (D3)				112 Lung H	42100625	1840	1474	10.7	87	3.8	87
42100188 (D3)				56 Stomach H	42100620	1429	1204	9.1	90	3.5	90

FIG. 10

Gene Name	Bal Probe 1		Probe 2		QEM ID	Probe1		Probe2		Probe1		Probe2	
	Exp Name	P1	Exp Name	P2		Value	B/B	Value	B/B	Value	B/B	Value	B/B
421100181 (C3)	118.8 185A Ovary T		591 Fetal tissue		422X0007	26711	1424	103.3	54	1424	103.3	54	2.0
421100181 (C3)	111.5 521 Ovary Tumor		556 Spinal Cord N		422X0028	13559	1179	65.3	68	1179	65.3	68	3.9
421100181 (C3)	111.1 476A Ovary T (unc)		415A Aorta F		422X0014	14125	1273	67.3	61	1273	67.3	61	5.6
421100181 (C3)	100.8 205A Ovary T		200A Liver N		422X0006	16121	1488	93.1	41	1488	93.1	41	2.3
421100181 (C3)	15.1 261A Ovary Tumor		573 Breast N		42210023	11326	2235	58.2	68	2235	58.2	68	4.4
421100181 (C3)	14.6 031A Ovary T (unc)		222A Dendritic cell		42210008	6584	1424	24.5	40	1424	24.5	40	2.1
421100181 (C3)	14.4 261A Ovary Tumor		52 Pancreas F		422X0029	9865	2245	40.9	64	2245	40.9	64	3.6
421100181 (C3)	14.3 429A Ovary T (unc)		364A Ovary N		42210014	2801	618	22.6	60	618	22.6	60	7.4
421100181 (C3)	14.2 261A Ovary Tumor		510 Skeletal muscle		42210021	8271	1949	39.5	68	1949	39.5	68	3.6
421100181 (C3)	13.8 511S Ovary T (unc)		C110 Small intestine		42210004	2281	607	11.6	60	607	11.6	60	2.1
421100181 (C3)	12.5 265A Ovary Tumor		C75 Heart F		42210024	3192	1294	19.2	68	1294	19.2	68	4.0
421100181 (C3)	12.1 522 Ovary Tumor		C79 Kidney F		42210027	305	1276	3.6	70	1276	3.6	70	1.9
421100181 (C3)	12.2 266A Ovary T		572 Ovary F		42210013	2714	1260	14.1	46	1260	14.1	46	2.7
421100181 (C3)	12.1 9111 Ovary T (SCN)		12 Skin F		42210001	1774	847	8.4	56	847	8.4	56	2.1
421100181 (C3)	11.9 9851 P Ovary T (C)		985S P Ovary T (S)		422X0002	6967	3726	41.5	70	3726	41.5	70	9.2
421100181 (C3)	11.6 482A Ovary T		C119 Heart N		42200010	2414	1471	6.2	50	1471	6.2	50	1.9
421100181 (C3)	11.5 525 Ovary Tumor		C112 Lung N		422X0025	1657	1054	9.7	69	1054	9.7	69	2.9
421100181 (C3)	11.4 262A Ovary Tumor		C11 Bone Marrow		42210019	848	1244	4.5	65	1244	4.5	65	2.7
421100181 (C3)	11.2 066A Ovary T		311A Large Intestine		422A0022	3171	2214	16.8	69	2214	16.8	69	3.8
421100181 (C3)	11.1 115A Ovary Tumor		530 PHN17 Lactifer		42210005	610	544	4.2	53	544	4.2	53	1.9
421100181 (C3)	11.0 201A Ovary Tumor		S7 Ovary N		42220026	592	710	3.7	75	710	3.7	75	2.6
421100181 (C3)	11.0 426A Ovary T (unc)		56 Stomach N		422X0020	1197	1247	7.8	65	1247	7.8	65	3.5
421100181 (C3)	10.8 426A Ovary T (unc)		241A Esophagus F		42210012	784	797	4.5	95	797	4.5	95	2.4
421100181 (C3)	10.6 426A Ovary T (unc)		11 Colon F		42210009	3470	862	8.9	24	862	8.9	24	1.7

FIG. 11

Gen Name	Bal Probe 1 Exp Name	P1	P2 Name	Probe 2	QCM ID	Probe1 Value	Probe2 Value	Probe1 S/B	Probe1 A%	Probe2 S/B	Probe2 A%
42100182 (H1)	116.7 426A Ovary T (met)	116.7 426A Ovary T (met)	426A Adip N	422X00611	422X00611	7706	462	46.3	75	4.5	75
42100182 (H1)	110.7 205A Ovary T	110.7 205A Ovary T	270A Liver N	422Q00606	422Q00606	10171	950	61.2	41	1.8	41
42100182 (H1)	19.9 185A Ovary T	19.9 185A Ovary T	591 Fetal tissue	422X00607	422X00607	14115	1459	62.1	48	2.2	48
42100182 (H1)	18.8 53A Ovary Tumor	18.8 53A Ovary Tumor	586 Spinal Cord N	422G00628	422G00628	7781	880	47.3	71	1.4	71
42100182 (H1)	16.4 161A Ovary T (met)	16.4 161A Ovary T (met)	11 Colon N	422H00609	422H00609	4807	748	27.6	47	2.2	47
42100182 (H1)	15.1 263A Ovary Tumor	15.1 263A Ovary Tumor	571 Breast N	422H00623	422H00623	9815	1909	57.1	74	4.2	74
42100182 (H1)	14.9 429A Ovary T (met)	14.9 429A Ovary T (met)	161A Ovary N	422H00614	422H00614	2601	543	20.3	61	6.7	61
42100182 (H1)	13.5 264A Ovary Tumor	13.5 264A Ovary Tumor	572 Pancreas N	422H00629	422H00629	7914	2274	38.8	71	3.9	71
42100182 (H1)	9.9 535 Ovary Tumor	9.9 535 Ovary Tumor	CT1 Bone Marrow	422H00619	422H00619	480	1375	3.5	80	3.0	80
42100182 (H1)	12.3 5115 Ovary T (met)	12.3 5115 Ovary T (met)	510 Skeletal muscle	422H00624	422H00624	8994	3245	34.6	69	5.1	69
42100182 (H1)	12.3 9111 Ovary T (SC H)	12.3 9111 Ovary T (SC H)	CT10 Small intestine	422H00601	422H00601	1864	708	8.1	67	2.2	67
42100182 (H1)	9.3 522 Ovary Tumor	9.3 522 Ovary Tumor	12 Skin N	422H00601	422H00601	2552	1111	12.7	41	2.6	41
42100182 (H1)	12.2 181A Ovary T (met)	12.2 181A Ovary T (met)	CT9 Kidney H	422H00627	422H00627	889	889	4.2	69	1.4	69
42100182 (H1)	9.9 462A Ovary T	9.9 462A Ovary T	CT19 Endothelial cell	422H00606	422H00606	1516	1567	18.7	55	2.2	55
42100182 (H1)	11.8 265A Ovary Tumor	11.8 265A Ovary Tumor	CT19 Brain H	422H00610	422H00610	608	1190	4.2	60	2.3	60
42100182 (H1)	11.8 266A Ovary T	11.8 266A Ovary T	CT5 Thym H	422H00604	422H00604	2064	1080	13.6	67	4.5	67
42100182 (H1)	11.5 262A Ovary Tumor	11.5 262A Ovary Tumor	527 Ovary N	422H00603	422H00603	1550	847	7.0	58	2.1	58
42100182 (H1)	1.4 186A Ovary T	1.4 186A Ovary T	144A Large Intestine	422H00622	422H00622	2559	1651	13.2	71	3.2	71
42100182 (H1)	1.3 288A Ovary Tumor	1.3 288A Ovary Tumor	530 PHAC Tactival	422H00605	422H00605	511	738	3.9	62	2.2	62
42100182 (H1)	1.3 135A Ovary Tumor	1.3 135A Ovary Tumor	CT12 Lung H	422H00605	422H00605	894	1120	5.1	66	1.1	66
42100182 (H1)	11.2 9185 1 P Ovary T (S)	11.2 9185 1 P Ovary T (S)	57 Ovary H	422H00626	422H00626	440	567	3.3	60	2.2	60
42100182 (H1)	11.1 428A Ovary T (met)	11.1 428A Ovary T (met)	9185 1 P Ovary T (S)	422H00602	422H00602	4188	3529	21.6	66	9.5	66
42100182 (H1)	1.0 201A Ovary Tumor	1.0 201A Ovary Tumor	241A Esophagus H	422H00612	422H00612	725	689	6.2	65	2.8	65
42100182 (H1)			56 Stomach H	422H00620	422H00620	1008	1018	7.4	62	3.2	62

FIG. 12

Gene Name	Bal Probe 1		P1	P2 Name		GEM ID	Probe 2		Probe 1		Probe 2	
	Exp Name						Value		B/B	A%	B/B	A%
421V00189 [001]	11.2 426A Ovary T (met)			415A Aorta N		422X0611	8072	233	55.2	67	2.4	67
421V00189 [001]	11.7 523 Ovary Tumor			556 Spinal Cord N		422X0628	7367	517	42.6	69	2.5	69
421V00189 [001]	12.6 429A Ovary T (met)			464A Ovary N		422X0614	2850	227	21.7	64	3.5	64
421V00189 [001]	18.0 485A Ovary T			S91 Fetal tissue		422X0607	11711	1469	54.0	58	2.2	58
421V00189 [001]	17.3 261A Ovary Tumor			S73 Breast N		42210623	6949	952	37.8	69	2.0	69
421V00189 [001]	5.8 525 Ovary Tumor			C14 Bone Marrow		42210619	208	1210	2.1	44	2.9	44
421V00189 [001]	15.0 205A Ovary T			270A Liver H		42200646	8676	1747	52.3	57	2.6	57
421V00189 [001]	14.5 483A Ovary T (met)			H Colon N		42210649	3149	707	17.4	57	2.0	57
421V00189 [001]	14.4 261A Ovary Tumor			S40 Skeletal muscle		42200621	6312	1431	29.1	77	2.9	77
421V00189 [001]	14.2 261A Ovary Tumor			S2 Pancreas H		42200629	7612	1809	38.4	79	3.3	79
421V00189 [001]	1.2 402A Ovary T			C119 Brain H		42200610	468	1308	3.4	60	2.3	60
421V00189 [001]	12.9 0134 Ovary T (SCH)			P350 H		42200601	2500	860	12.3	51	2.1	51
421V00189 [001]	12.5 5315 Ovary T (met)			C170 Small intestine		42200601	1424	569	6.7	61	2.1	61
421V00189 [001]	12.4 263A Ovary Tumor			C15 Heart H		42200614	1712	724	11.8	70	2.8	70
421V00189 [001]	12.3 461A Ovary T (met)			272A Endothelial cells		42200608	3083	1412	17.0	62	2.0	62
421V00189 [001]	11.9 266A Ovary T			S27 Ovary H		42200603	1170	742	8.0	47	2.0	47
421V00189 [001]	1.9 486A Ovary T			S40 PHM Tactival		42200605	3071	580	2.6	41	2.0	41
421V00189 [001]	11.7 262A Ovary Tumor			411A Large Intestine		422A0622	2097	1202	11.2	86	2.7	86
421V00189 [001]	11.3 455A Ovary Tumor			S7 Ovary H		42200626	373	470	2.9	47	2.0	47
421V00189 [001]	11.1 268A Ovary Tumor			C172 Lung H		422V0625	969	1094	5.6	72	2.9	72
421V00189 [001]	11.1 201A Ovary Tumor			S6 Stomach N		422V0620	750	672	5.6	62	2.4	62
421V00189 [001]	11.1 426A Ovary T (met)			213A Esophagus H		42200612	498	446	4.2	73	2.1	73
421V00189 [001]	1.0 9465 1 P Ovary TG			9485 S P Ovary TG		422Y0602	3117	3174	16.7	91	8.2	91
421V00189 [001]	5.22 Ovary Tumor			C19 Kidney N		42290627	224	409	2.3	48	2.1	48

FIG. 13

Gene Name	Bal Probe Name	P1	P2 Name	GEM ID	Probe 1		Probe 2	
					Value	S/B	Value	S/B
421100187 (E11)	120.2 426A Ovary T (met)		415A Aorta N	422X0611	5441	36.3	270	2.1
421100187 (E11)	110.0 523 Ovary Tumor		S26 Spinal Cord N	422X0628	5018	27.1	531	2.1
421100187 (E11)	116.3 429A Ovary T (met)		464A Ovary F1	422X0614	1252	10.1	130	2.5
421100187 (E11)	15.7 465A Ovary T		S91 Fetal tissue	422X0607	9507	35.8	1668	2.1
421100187 (E11)	14.4 205A Ovary T		270A Liver F1	422X0606	5456	31.1	1245	2.1
421100187 (E11)	14.2 265A Ovary Tumor		C75 Heart F1	422X0624	1834	11.9	418	2.0
421100187 (E11)	4.1 482A Ovary T		C719 Brain F1	422X0610	109	2.6	1259	2.0
421100187 (E11)	11.6 264A Ovary Tumor		S10 Skeletal muscle	422X0621	1733	17.7	1036	2.1
421100187 (E11)	11.1 263A Ovary Tumor		S71 Blood F1	422X0623	4163	21.0	1299	2.1
421100187 (E11)	1.5 5115 Ovary T (met)		C710 Small intestine	422X0601	1365	8.8	627	2.1
421100187 (E11)	1.1 264A Ovary Tumor		S2 Pancreas F1	422X0629	1455	14.9	1640	2.1
421100187 (E11)	1.1 464A Ovary T (met)		272A Testis cells	422X0608	2667	13.4	1270	2.1
421100187 (E11)	1.1 522 Ovary Tumor		C79 Kidney F1	422X0627	291	2.4	605	2.1
421100187 (E11)	1.1 466A Ovary T		S10 FBM C (artery)	422X0605	410	3.2	687	2.1
421100187 (E11)	11.6 9114 Ovary T (SCH)		12 Skin F1	422X0601	1622	7.9	984	2.1
421100187 (E11)	11.5 262A Ovary Tumor		144A Large Intestine	422X0622	1892	10.1	1245	2.1
421100187 (E11)	1.5 268A Ovary Tumor		C712 Lung F1	422X0625	604	4.1	908	2.1
421100187 (E11)	1.4 426A Ovary T (met)		211A Esophagus F1	422X0612	246	2.7	125	2.1
421100187 (E11)	1.3 455A Ovary Tumor		S7 Ovary F1	422X0626	382	2.9	501	2.1
421100187 (E11)	1.2 201A Ovary Tumor		S6 Stomach N	422X0620	558	4.2	677	2.1
421100187 (E11)	1.0 9185 1 P Ovary T (S)		9185 S P Ovary T (S)	422X0602	2582	15.1	2493	2.1
421100187 (E11)	484A Ovary T (met)		11 Colon F1	422X0609	2261	12.5	562	2.1
421100187 (E11)	266A Ovary T		S27 Ovary F1	422X0603	1739	9.7	965	2.1
421100187 (E11)	S25 Ovary Tumor		C74 Bone Marrow	422X0619	283	2.2	845	2.1

FIG. 14

11721-1

ACGGTTTC.AATGGACACTTTTATTGTTTACTTAATGGATCATCAATTTTGTCTCACTACCTA
CAAATGGAAATTTTCATCTTGTTTCC.ATGCTGAGTAGTGAAACAGTGACAAAGCTAATCATAA
TAACCTACATCAAAAGAGAACTAAGCTA.ACACTGCTCACTTTCTTTTAAACAGGCAAAATA
TAAATATATGCACTCTAXAATGCACAATGGTTT.AGTCACTAAAAAATTCAAATGGGATCTT
GAAGAATGTATGCCAAATCC.AGGGTGCAGTGAAGATGAGCTGAGATGCTGTGCAACTGTTT
AAGGGTTCCTGGCACTGCACTCTTGCCCACTAGCTGAATCTTGACATGGAAGGTTTTAGC
TAAFGCCAAAGTGGAGATGCAGAAAATGCTAAGTTGACTTAGGGGCTGTGCACAGGAATA
AAAGCCAGGAAAGT.ACTAAATATTGCTGAGAGCATCCACCCAGGAAGGACTTTACCTTC
CAGGAGCTCCAAACTGGCACCCACCCCA.GTGCTCACATGGCTGACTTTATCCTCCGTGTTT
CATTTGGCACAGCAAGTGGCAGTG

11721-2

AAGGCTGGTGGGTTTTTGATCCTGCTGGAGAACCTCCGCTTTCATGTGGAGGAAGAAGGG
AAGGGAAAAGATGCTTCTGGGAACAAGGTTAAAGCCGAGCCAGCCAAAATAGAAGCTTTT
CGAGCTTCACTTTCCAAGCTAGGGGATGTCTATGTCAATGATGCTTTTGGCACTGCTCACA
GAGCCACAGCTCCATGGTAGGAGTCAATCTGCCACAGAAGGCTGGTGGGTTTTTGATGA
AGAAGGAGCTGAACCTACTT.GCA.AAGGCTTGGAGAGCCAGAGCGACCTTCTGGCCA
TCTGGGGCGGAGCTAAAGTTGCAGACAAGATCCAGCTCATCAATAATATGCTGGACAAAG
TCAATGAGATGATTATTGGTGGTGGAAATCGCTTTTACCTTCTTAAGGTGCTCAACAACAT
GGAGATTGGCACTTCTCTGTTTGAAGAGCGAGCCAAGATTGTCAAAGACCTAATGTCC
AAAGCTGACAAGAATGGTGTGAAGATTACCTTGCCTGTTGACTTTGTCACTGCTGACAAGT
TTGATGA

11724-1

TTTGTTCTTACATTTTTCTAAAGAGTTACTTAAATCAGTCAACTGGTCTTTGAGACTCTTA
AGTCTGATTCCAACCTAGCTAATTCATCTGAGAAGTGTGGTATAGGTGGCGTGTCTCTTC
TAGCTGGGACAAAAGTTCTTTGTTTCCCTCTGAGAGTATCACAGACCTTCTGCTGAAGC
TGGACCTCTGTCTGGCCCTTGGACTCCCAATCTGCTTGTCAATGTTCAAGCCTGGAAATGTT
AATCTTTAA.TCTTCCATATGGATGGACATCTGTCTAAGTTGATCCTTTAGAACACTGCAAT
TATCTTCTTTGAGTCTAATTTCTTCTTGGCTTGAATCGCATCACTAAACTTCTCTCCC
ATTTCTTAGCTTCACTATCACCTGTGACGATCATCTGGAGGGAAGACATGCTCTTAGTA
AAGGCTGCAAGCTGGGTCAAGTACTGTCCAAGTTTCTGAAAGTTGCTGAACCTTCTGT
CTTCTTGTTC.AAAGTAACTTCAATCTCTCCAATGTCTCTTCCAAGTGGACTTTTCTCTGC
GCAAGCATCCAG

11724-2

TCATTGCCTGTGATGGCATCTGCAATGTGATGAGCAGCCACGAAGTTGTAGATTTCAATTCA
ATCA.AAGGATTACCATGTGGTGGAAAGCTGTGAGGCAAGAGAAACAAGAAGTGTATGGCA
AGTT.AAGAAGCACAGAGGCAAAACAAGGAGACAGAAAAGCAGTTGCAGGAAGCTGAG
CAAGAAATGGAGCAAAATGAAAGAAAAGATGAGAAAGTTTGTCTAAATCT.AAACAGCAGAA
AATCTAGAGCTGGAAGAAGAGAAATGACCGGCTTAGGGCAGAGGTGCACCTGCAGGAG
ATACAGCTAAAGAGTGTATGCAAAACACTTCTTCTTCCAATGCCACCATGAAGGAAGAAC
TTGAAAGGGTCAAAATGGAGTATGA.AACCTTCTTCTAAGAAGTTTCAGTCTTTAATGTCTGA
GAAAGACTCTCTAAGTGAAGAGCTTCAAGATTTAAAGCATCAGATAGAAGGTAATGTATC
TAAACAAGCTAACCTAGAGGCCACCGAGAAACATGATAACCAACGAATGTCACTGAAGA
GGGAACACAGTCTATACCAGT

FIG. 15A

11725-32-1,2

AAGCCAATAATCACCATTATTACTTAATATATGCCAACCCTGTACTTGGCAGTTCACAA
ATTCTCACCGTTACAACAACCCCATGAGGTATTTATTTCCATTCTATAGATAGGGAAACCA
CAGCTCAAGTAAGTTAGGAACTGAGCCAAGTATACACAGAAATACGAAGTGGCAAAACTA
GAAGGAAAGACTGACACTGCTATCTGCTGGCCTCCAGTGTCTCTGGCTCTTTTCACACGGGT
CAATGTCTCCAGCGCTGCTGCTGCTGCTGCATTACCATGCCCTCATTGTTTTCTTCTCTG
GTGTTCAACTGCATCCTTCAAAGAATCTAATCTATTCCAGAGACCCTTATTTCTTCTCTC
TTTCTGAAATTACTTTTAAATAATTCTTCATGAGGGGAAAAGAAGATGCCTGTTGGTAGTT
TTGTTGTTTAAAGCTGCTCAATTTGGGACTTAAACAATTTGTTTTCATCTTGTACATCCTGTA
ACAGCTGTGTTTTGCTAGAAAGATCACTCTCCCTCTCTTTTAGCATGGCTTCTAACCTCTTC
AATTCATTTTCTTTTCTTTCAACACAATCTCAAGTCTTCAAAGTGTGATGCAGAAGAGGC
CTCTTTCAAGTTATGTTGTGCTACTTCTGAACATGTGCTTTTAAAGATTCAATTTCTTCTTG
AAGATCCTGTAAACCACTTCCCTGTATTGGCTAGGTCTTTCTCTTTCTCTTCCAAAACAGCCT
TCATGGTATTCATCTGTTCTCTTTCTTTTAAATAAGTTCAGGAGCTTCAGAAC

11726-1&2

CAAGCTTTTTTTTTTTTTTAAAAAGTGTAGCATTAAATGTTTTATTGTCACGCAGATGGCA
ACTGGGTTTATGTCTTCATATTTTATATTTTGTAAATTAAAAAAATTACAAGTTTTAAATA
GCCAATGGCTGTTTATATTTTCAGAAAACATGATTAGACTAATTCATTAATGGTGGCTTCA
AGCTTTTCTTTATTGGCTCCAGAAAAATCACCCACCTTTTGTCCCTTCTTAAAAAACTGGAA
TGTGGCATGCATTTGACTTCACTCTGAAAGCAACATCCTGACAGTCAATCCACATCTACTT
CAAGGAATATCAGTTGGAAATACTTTTCAAGAGGGGAATGAAAGAAAGGCTTGATCATTT
TGCAAGGCCCCACACCACGTGCTGAGAACTCAACTACTACAAGTTTATCACCTGCAGCGTC
CAAGGCTTCTTCAAAAGCAGTCTTCTCTGATCTGCTTCAACATCTTGGCTGCTGGAGTCT
GACGAGCGGCTGTAAAGGACCGATCCAAATGATCCAAAGCACCAACAGAGCTTCAAGA
CTCGCTGCTTGGCTTGAATTCGGATCCCATATCGCCATGGCCT

11727-1&2

AAGTGTAGCATTAAATGTTTTATTGTCACGCAGATGGCAACTGGCTTTATGTCTTCATATTT
TATATTTTGTAAATTAAAAAAATTCAGTTTAAATAGCCAATGGCTGTTATATTTTC
AGAAAACATGATTAGACTAATTCATTAATGGTGGCTTCAAGCTTTTCTTATTGGCTCCAG
AAAAATCACCCACCTTTTGTCCCTTCTTAAAAAACTGGAATGTTGGCATGCATTTGACTTCA
CACTCTGAAGCAACATCCTGACAGTCAATCCACATCTACTTCAAGGAATATCACGTTGGAAT
ACTTTTCAGAGAGGGAATGAAAGAAAGGCTTGATCATTTTGAAGGCCCCACACCACGTGG
CTGAGAAAGTCAACTACTACAAGTTTATCACCTGCAGCGTCCAAAGGCTTCTGAAAAGCAGT
CTTGCTCTCGATCTGCTTCAACATCTTGGCTGCTGGAGTCTGACGAGCGGCTGTAAAGGACC
GATCGAAATGGATCCAAAGCACCAACAGAGCTTCAAGACTCGCTGCTTGGCATGAATTC
GGATCCCA

FIG. 15B

11723.1.40.19.19

TACAAACTTTATTGAAACGGCACACGGGCACACACAAACACCCCTGTGGATAGGGAAAA
GCACCTGGCCACAGGGTCCACTGAAACGGGGAGGGGATGGCAGCTTGTAAATGTGGCTTTT
GCCACAACCCCTTCTGACAGGGAAGGCCTTAGATTGAGGCCCCACCTCCCATGGTGATGG
GGAGCTCAGAATGGGGTCCAGGGAGAATTTGGTTAGGGGGAGGTGCTAGGGAGGCATGA
GCAGAGGGCACCCCTCCGAGTGGGGTCCCCAGGGCTGCAGAGTCTTCAGTACTGTCCCTCAC
AGCAGCTGTCTCAAGGCTGGGTCCCTCAAAGGGGCGTCCCAGCGCGGGGCTCCCTGCGC
AAACACTTGGTACCCCTGGCTGCGCAGCGGAAGCCAGCAGGACAGCAGTGGCGCCGATCA
GCACAACAGACGCCCTGGCGGTAGGGACAGCAGGCCAGCCCTGTGGTTGTCTCGGCAG
CAGGTCTGGTTATCATGGCAGAAAGTGTCTTCCCACACTTCACGTCCTTCACACCCACGTG
AXGGCTACXGGCCAGGAAG

11723.2.40.19.19

CCCGTGGGTGCCATCCACGGAGTTGTTACCTGATCTTTGGAAGCAGGATCGCCCGTCTGCA
CTGCAGTGGAAAGCCCCGTGGGCAGCAGTGATGGCCATCCCCGCATGCCACGGCCTCTGGG
AAGGGGCAGCAACTGGAAGTCCCTGAGACGGTAAAGATGCAGGAGTGGCCGGCAGAGCA
GTGGGCATCAACCTGGCAGGGGCCACCCAGATGCCTGCTCAGTGTGTGGGCCATTTGTCC
AGAAGGGGACGGCAGCAGCTGTAGCTGGCTCCTCCGGGGTCCAGGCAGCAGGCCACAGGG
CAGAACTGACCATCTGGGCACCGCGTTCAGCCACCAGCCCTGCTGTTAAGGCCACCCAGC
TCACCAGGGTCCACATGGTCTGCTGCTCCGACTCCCGGGTCTTGGGGCCCTGATGGTTC
TACCTGCTGTGAGCTGCCAGTGGGAAGTATGGCTGCTGCCAATGCCCAACGCCACCTGCT
GCTCCGATCACCTGCACCTGCTGCCCAAGACACTGTGTGTGACCTGATCCAGAGTAAGTGC
CTCTCCAAGGAGAACG

11730-1

GAATCACCTTTCTGGTTTACCTAGTACTTTGTACAGAACAATGAGGTTTCCCACAGCGGAG
TCTCCCTGGGCTCTGTTTGGCTCTCGGTAAGGCAGGCCTACACCTTTTCTCTCTCTATGG
AGAGGGGAATATGCAATTAAGGTGAAGAGTACCTTCCAAAAGTGAGAAAGGGATTGATT
GCTGCTTCAGGACTGTGGAAATTTTCCAATGTTTTACAAATGGTTGCTACAAAACAACA
AAAAGGTAATTACAAAATGTGTACATCACAACATGCTTTTTAAAGACATTATGCAATTGTGC
TCACATTCCTTAAATGTTGTTTCCAAAAGGTGCTCAGCCTCTAGCCCAGCTGGATTCTCCGG
GAAGAGGCAGAGACAGTTTGGCGAAAAGACACAGGGAAGGAGGGGGTGGTGAAGGA
GAAAGCAGCCTTCCAGTTAAAGATCAGCCCTCAGTTAAAGGTCAGCTTCCCGCAXGCTGGC
CTCAXGCGGAGTCTGGGTCCAGAGGGACGAGCAGCAGGAGGTTGGGACTGGGGCGT

11730-2

AACCGGAGCGCGAGCAGTACCTGGGTGGCCACCATGGCTGGGATCACCACCATCGAGGCG
GTGAAGCGCAAGATCCAGGTTCTGCAGCAGCAGGCAGATGATGCAGAGGAGCGAGCTGA
GCGCCTCCAGCGAGAAGTTGAGGGAGAAAGCCGGGGCCCGGGAACAGGCTGAGGCTGAGG
TGGCCTCCTTGAACCGTAGGATCCAGCTGGTTGAAGAAGAGCTCGACCGTGCTCAGGAGC
GCCTGGCCACTGCCCTGCAAAAAGCTGGAAGAAGCTGAAAAAGCTGCTGATGAGAGTGAGA
GAGGTATGAAGGTTATTGAAAACCGGGCCTTAAAAGATGAAGAAGATGGAAGTCCAG
GAAATCCAAGTCAAAGAAGCTAAGCACAATGCAGAAGAGGCAGATAGGAAGTATGAAGA
GGTGGCTCGTAAGTTGGTGATCAATGAAGGAGACTTGGAAACCCACAGAGGAACGAGCTGA
GCTGGCAGAGTCCCGTTGCCGAGAGATGGATGAGCAGATTAGACTGATGCACCAGAACCT
GAAGTGTCTGAGTGC

FIG. 15C

11732.1contig

GAGAACTTGGCCTTTATTGTGGGCCCAGGAGGGCACAAGGTCAGGAGGCCCAAGGGAGG
GATCTGGTTTTCTGGATAGCCAGGTATAGCATGGGTATCAGTAGGAATCCGCTGTAGCTG
CACAGGCCTCACTTGGCTGCAGTTCCGGGGAGAAACCTGCACTGCATGGCGTTGATGACCT
CGTGGTACACGACAGAGCCATTGGTGCAGTGCAAGGGCACGCGCATGGGCTCCGTCCTCG
AGGGCAGGCAGCAGGAGCATTCTCCTGCACATCCTCGATGTCAATGGAGTACACAGCTT
TGCTGGCACACTTTCCCTGGCAGTAATGAATGTCCACTTCCTCTTGGGACTTACAATCTCCC
ACTTTGATGTACTGCACCTTGGCTGTGATGTCTTTGCAATCAGGCTCCTCACATGTGTCACA
GCAGGTGCCTGGAATTTTACGATTTTGCCTCCTTCAGCCAGACACTTGTGTTTCATCAAATG
GTGGGCAGCCCGTGACCCTCTTCTCCAGATGTACTCTCCTCT

11732.2contig

GCCTGGACCTTGCCGGATCAGTGCCACACAGTGACTTGCTTGGCAAATGGCCAGACCTTGC
TGCAGAGTCATCGTGTCAATTGTGACCATGGACCCCGGCCCTTCATGTGCCAACAGCCAGTC
TCCTGTTCCGGGTGGAGGAGACGTGTGCTGGCCTGGACCTGCCCTTGTGTGTGCACGGGG
AGTTCCACTCGGCACATCGTCACTTTCGATGGGCAGAATTTCAAGCTTACTGGTAGCTGCT
CCTATGTCACTTTTCAAAACAAGGAGCAGGACCTGGAAGTGCTCCTCCACAATGGGGCCTG
CAGCCCCGGGGCAAAACAAGCCTGCATGAAGTCCATTGAGATTAAAGCATGCTGGCGTCTC
TGCTGAGCTGCACAGTAACATGACATGCGAGTGGATGGGAGACTGGTCCTTGGCCCCGTA
CGTTGGTGAACAACATGGAAGTCAGCATCTACCGCGCTATCATGTATGAAGTCAGGTTTACC
CATCTTGGCCACATCCTCACATACACCGGCCXCAAAACAACGACTT

11735-1-2

AGATCAACCTCTGCTGGTCAGGAGGAATGCCCTTCCTTGTCTTGGATCTTTGCTTTGACGTTT
TCGATAGTRWCACTKKRYTSTRAMSKMAAGNGYRATGRWMTTKSYWGWRAASYXTMWWW
RSGRARAYTTGCAAYCCCMCCCTCWAGCGSAGKACCARGTGCAAGGTGGACTCTTTCTG
GATGTTGTAGTCAGACAGGGCTGCCCTCATCTTCCAGCTGTTTCCCAGCAAAAGATCAACCTC
TGCTGATCAGGAGGGATGCCCTTCTTATCTTGGATCTTTGCCCTTGACATTCTCGATGGTGTG
ACTGGGCTCCACCTCGAGGGTGATGGTCTTACCAGTCAGGCTCTTCACGAAGATYTGATC
CCACCTCTGAGACGGAGCACCAGCTCCAGGGTTCAGTCTTCTGGATGTTGTAGTCAGACA
GGGTGGCYCCATCTTCCAGCTGGTTCSSAGCAAAAGATCAACCTCTGCTGGTTCAGGAGGRAT
GCCTTCTTGTCTGATCTTTGCTTACCTCTCTCRATGGTGTCACTCGGCTCCACTTCGA
GAGTCATGGTCTTACCAGTCAGGGTCTTCACGAAGATCTGCATCCACCTCTAA

11740.2.contig

AAGTCACAAACAGACAAAGATTATTACCAGCTGCAAGCTATATTAGAAGCTGAACGAAGA
GACAGAGGTGATGATCTGAGATGATGGAGACCTTCAAGCTCGAATTACATCTTTACAAG
AGGAGGTGAAGCATCTCAAAACATAATCTCGAAAAAGTGGAAGGAGAAAGAAAAGAGGCT
CAAGACATGCTTAATCACTCAGAAAAAGGAAAAAGATAATTTAGAGATAGATTTAAACTAC
AAACTTAAATCATTACAACAACGGTTAGAACAAAGAGCTAAATGAACACAAGTAACCAAA
GCTCGTTTAACTGACAAACATCAATCTATTGAAGAGGCAAAAGTCTGTGGCAATGTGTGAG
ATGGAAAAAAAGCTGAAAGAAAGAAAGAGAGCTCGAGAGAAAGGCTGAAAAATCGGGTTGT
TCAGATTGAGAAACAGTGTTCATGCTAGACGTTGATCTGAAGCAATCTCAGCAGAAACT
AGAACATTTGACTGGAATAAAGAAAGGATGGACGATGAAGTTAAGAATCTA

FIG. 15D

11765.2&64.2.contig

CGCCTCCACCATGTCCATCAGGGTGACCCAGAAAGTCCTACAAGGTGTCCACCTCTGGCCCC
 CGGGCCTTCAGCAGCCGCTCCTACACGAGTGGGCCCCGGTTCCCGCATCAGCTCCTCGAGCT
 TCTCCCGAGTGGGCAGCAGCAACTTTTCGGGTGGCCTGGGCGGCGGCTATGGTGGGGCCA
 GCGGCATGGGAGGCATCACCGCAGTTACGGTCAACCAGAGCCTGCTGAGCCCCCTTGTCTCT
 GGAGGTGGACCCCAACATCCAGGCCGTGGCAGCCAGGAGAAGGAGCAGATCAAGACCCT
 CAACAACAAAGTTTGCCTCCTTCATAGACAAGGTACGGTTCCTGGAGCAGCAGAACAAAGAT
 GCTGGAGACCAAGTGGAGCCTCCTGCAGCAGCAGAAGACGGCTCGAAGCAACATGGACA
 ACATGTTTCGAGAGCTACATCAACARCCTTAGGCGGCAGCTGGAGACTCTGGGCCAGGAGA
 AGCTGAAGCTGGAGGCGGAGCTTGGCAACATGCAGGGGCTGGTGGAGGACTTCAAGAAC
 AAGTATGAGGATGAGATCAATAAGCGTACAGAGATGGAGAACGAATTTGTCTCATCAAG
 AAGGATGTGGATGAAGCTTACATGAACAAGGTAGAGCTGGAGTCTCGCCTGGAAGGGCTG
 ACCGACGAGATCAACTTCTCAGGCAGCTGTATGAAGAGGAGATCCGGGAGCTGCAGTCC
 CAGATCTCGGACACATCTGTGGTCTGTCCATGGACAACAGCCGCTCCCTGGACATGGACA
 GCATCATTGCTGAGGTCAAGGCACAGTACGAGGATATTGCCAACCCGAGCCGGGCTGAGG
 CTGAGAGCATGTACCAGGTCAAGTATGAGGAGCTGCAGAGCCTGGCTGGGAAGCACGGGG
 ATGACCTGCGGCGCACAAAGACTGAGATCTCTGAGATGAACCCGGAACATCAGCCCGGCT
 XCAGGCTGAGATTGAGGGCCTCAAAGGCCAGAXGGCTTXCCTGGAXGXCCGCCAT

11767.2.contig

CCCGGAGCCAGCCAAACGAGCGGAAAATGGCAGACAAATTTTTCGCTCCATGATGCGTTATCT
 GGGTCTGGAAACCCTCAAGGATGGCCTGGCGCATGGGGGAACCAGCCTGCTGGG
 GCAGGGGGCTACCCAGGGGCTTCTATCCTGGGGCTACCCCGGGCAGGCACCCCCAGGG
 GCTTATCCTGGACAGGCACCTCCAGGGGCTACCCCTGGAGCACCTGGAGCTTATCCCGGAG
 CACCTGCACCTGGAGTCTACCCAGGGGCTACCCAGGGGCTGGGGGCTACCCATCTTCTGG
 ACAGCCAAAGTCCCACCGGAGCCTACCCCTGCCACTGGCCCTATGGCGCCCCCTGCTGGGCA
 CTGATTGTGCTTATAACCTGCTTGGCTGGGGAGTGGTGGCTCGCATGCTGATAACAA
 TTCTGGGCACGGTGAAGCCCAATGCCAAACAGAAATGCTTATAGATTCCAAAGAGGGAAATG
 ATGTTGCCCTTCCACTTAAACCCAGGCTTCAATGAGAACAAACAGGAGAGTCAATTGTTGCCAA
 TACAAAGCTGGATAA

11768-1&2

GGGAATGCCAACAACTTTATTGAAGGAAAGTGCAATGAAATTTGTTGAAACCTTAAAAGG
 GGAAACTTAGACACCCCCCTCR₁CGMAGKACCARGTGCARA₂GTGGACTCTTTCTGGAT
 GTTGTAGTCAGACAGGGTRCGWCCATCTTCCAGCTGTTTYCCRGCAAAGATCAACCTCTGC
 TGATCAGGAGGRATGCCCTCTTATCTTGGATCTTTGCCCTTGACATTCTCGATGGTGTCACT
 GGGCTCCACCTCGAGGGTGATGGTCTTACAGTCAAGGTCTTACCGAAGATYTGCATCCCA
 CCTCTGAGACCGGAGCACCAGGTCCAGGGTRGACTCTTTCTGGATGTTGTAGTCAGACAGG
 GTGCGYCCATCTTCCAGCTGCTTTCCS₂CCAAAGATCAACCTCTGCTGGTCAGGAGGRATGC
 CTTCTTGTCTYTGATCTTTCCYTTGACRTTCTCAATGGTGTCACTCGGCTCCACTTCGAGA
 GTGATGGTCTTACCAGTCAAGGTCTTACCGAAGATCTGCATCCCACTCTAAGACGGAGCA
 CCAGGTGCAGGGTGGACTCTTTCTGGATG₂TTGTAGTCAGACAGGGTGGTCCATCTTCCA
 GCTGTTTCCCAGCAAAGATCAACCT

FIG. 15E

11768-1&2-11735-1&2

AGGTTGATCTTTGCTGGGAAACAGCTGGAAGATGGACGCACCCTGTCTGACTACAAcCATC
CAGAAAGAGTCCACCCTGCACCTGGTGTCCGTCTTAGAGGTGGGATGCAGATCTTTCGTGA
AGACCCTGACTGGTAAGACCATCACTCTCGAAGTGGAGCCGAGTGACACCATTGAGAAYG
TCAARGCAAAGATCCARGACAAGGAAGGCATYCCTCCTGACCAGCAGAGGTTGATCTTTG
CtSGGAAAgCAGCTGGAAGATGGRCCGACCCTGTCTGACTACAACATCCAGAAAGAGTCYA
CCCTGCACCTGGTGTCCGTCTCAGAGGTGGGATGCAATCTTCGTGAAGACCCTGACTGG
TAAGACCATCACCTCGAGGTGGAGCCAGTGACACCATCGAGAATGTCAAGGCAAAGAT
CCAAGATAAGGAAGGCATCCCTCCTGATCAGCAGAGGTTGATCTTTGCTGGGAAACAGCT
GGAAGATGGACGCACCCTGTCTGACTACAACATCCAGAAAGAGTCCACcTYTGACACYTGGT
MCTBCGtCTY₃GAGGKGGGRTG_{c2aa}TCTWMGTKWagaCaCtCaTKKYAAGRYYaTCAMCMWt
gAKKTCgAKYSCASTKWC₃CTWTCRAKAAAMGTYRWWGCAWagaTCCMAGACAAGGAAGGC
ATTCCTCCTGACCAGCAGAGGTTGATCT

11769.1.contig

ATGGAGTCTCACTCTGTCTGACCAGGCTGGAGCGCTGTGGTGGGATATCGGCTCACTGCAGT
CTCCACTTCCTGGGTTCAAGCGATCCTCCTGCCTCAGCCTCCCGAGTAGCTGGGACTACAG
GCAGGCGTCACCATAAATTTTGTATTTTGTAGTAGAGACATGGTTTCGCCATGTTGGCTGGG
CTGGTCTCGAACTCCTGACCTCAAGTCACTGTCTGGGCTCCCAAAGTGTGGGATTACA
GGCGAAAGCCAAAGCTCCCGGCCAGGCAACAACCTTTAGAATGAAGGAAATATGCAAAAG
AACATCACATCAAGGATCAATTAATTACCATCTATTAATTACTATATGTGGGTAATTATGA
CTATTTCCCAAGCAATCTACGTTGACTGCTTGAGAAGATGTTTGTCTGCATGGTGGAGAG
TGAGAAGGGCCAGGATCTTAGCT

11769.2.contig

AGCGCGGTCTTCCGGCCGGAGAAAGCTGAAGGTGATGTGGCCGCCCTCAACCGACGCATC
CAGCTCGTTGAGGACGAGTTGCACAGGCTCAGGAACGACTGGCCACGGCCCTGCAGAAAG
CTGGAGGAGGCAGAAAAGCTGCAGATGAGAGTGAGAGAGGAATGAAGGTGATAGAAAAG
CCGGCCCATGAAGGATGAGGAGAAAGATGGAGATTCAGGAGATGCAGCTCAAGAGGCCA
AGCACATTCGGGAAGAGGCTGACCGCAATAACGAGGAGGTAGCTCGTAACCTGGTCAATCC
TGGAGGGTCAAGCTGGAGAGGGCAGAGGCGTGGGAGGTGTCTGAACTAAAATGTGGT
GACCTGGAAGAAGAACTCAAGAAATGTTACTAACAATCTGAAATCTCTGGAGGCTGCATCT
GAAAAGTATTCTGAAAAGGAGGACAAAATATGAAGAAGAAATTAACCTTCTGTCTGACAAA
CTGAAAGAGGCTGAGACCCGTGCTGAATTTGCAGAGAGAACGGTTGCAAAACTGGAAAAG
ACAATTGATGACCTGGAACAGAAACTTCCCCAGC

11770.1.contig

GTGCACAGGTCCCATTTATTTAGAAAATAATAATTACAGTGATGAATAGCTCTTCTT
AAATTACAAAACAGAAACCACAAAGGAAGGAAGGAAAACCCCAAGGACTTCCAAGGGT
GAAGCTGTCCCTCCTCCCTGCCACCCTCCCAAGGCTCATTAGTGCTTGGAAAGGGGCAGA
GACTCAGAGGGGATCACTCTCCAGGGCCCTGGGCTGAAGCGGGTGAGGCAGAGAGTCC
TGAGGGCCACAGAGCTGGGCAACCTGACCGGCTCTCTGGCCCCCTCCCCACCCTGCCCCA
AACCTGTTTACAGCACCTTCGGCCCTCCCTCTAAACCCGTCCATCCACTCTGCACTTCCCA
GGCAGGTGGGTGGGCCAGGCTCAGCCATACTCCTGGGCGGGGTTTCGGTGACCAAGGC
ACACTCCCAGAGGTGATATCAAGGCT

FIG. 15F

11770.2.contig

GCAAGGAACTGGTCTGCTCACACTTGTGGCTTGGCGATCAGGACTGGCTTTATCTCCTGA
CTCACGGTGC.AAAGGTGCACTCTGCGAACGTTAAGTCCGTCCCCAGCGCTTGGAAATCCTAC
GGCCCCACAGCCGGATCCCCCTCAGCCTTCCAGGTCTCAACTCCCGTGGACGCTGAACAA
TGGCCTCCATGGGGCTACAGGTAATGGGCATCGCGCTGGCCGTCTGGGCTGGCTGGCCGT
CATGCTGTGCTGCGCGCTGCCCCATGTGGCGCGTGACGGCCTTCATCGGCAGCAACATTGTC
ACCTCGCAGACCATCTGGGAGGGCCTATGGATGAACTGCGTGGTGCAGAGCACCGGCCAG
ATGCAGTGCAAGGTGTACGACTCGCTGCTGGCACTGCCGAGGACCTGCAGGCGGCCCCG
GCCCTCGTCATCATCA

11773.1.contig

TGCAAAAGGGACACAGGGGTTCA.AAAAT.AAAAAATTTCTCTTCCCCCTCCCCAAACCTGTAC
CCCAGCTCCCCGACCAC.AACCCCTTCTCTCCCCGGGAAAGCAAGAAGGAGCAGGTGTG
GCATCTGCAGCTGGGAAGAGAGAGGGCGGGGAGGTGCCGAGCTCGGTGCTGGTCTCTTTC
CAAATATAAATACXTGTGTACAGAACTGAAATCCTCCAGCACCCACCACCAAGCACTCT
CCGTTTTCTGCCGGTGT.TTGGAGAGGGGGGGGGGAGGGGGCGCCAGGCCACCGGTGGCT
GCGGTCTACTGCATCCGCTGGGTGTGACCCCGCGAGCCTCCTGCTGCTCATTGTAGAAGA
GATGACACTCGGGGTCCCCCGGATGGTGGGGGCTCCCTGGATCAGCTTCCCGGTGTTGGG
GTTACACACCAGCACTCCCCACGCTGCCCGTTACAGAGACATCTTGC.ACTGTTGAGGTTG
TACAGGCCATGCTTGTACAGTTG

11778.1.contig

GGGTTGGAGGGACTGGTTCTTTATTTCA.AAAAGACACTTGTCAATATTCAGTATCA.AAACA
GTTGCACTATTGATTTCTCTTCTCCCAATCGGCCCCAAAGAGACCACATAAAAGGAGAGT
ACATTTTAAGCCAATAAGCTGCAGGATGTACACCTAACAGACCTCCTAGAAACCTTACCAG
AAAATGGGCACTGGGTAGGGAACGAAACTTAAAGATCA.ACAAACTGCCAGCCACCGGA
CTGCAGAGGCTGTACAGCCAGATGGGGTGGCCAGCGTGGCACAAAGCCAAAGCAAGTT
TCA.AAATAATA.AAAATTT.AAAAAGTTTGTACATAAGCTATTCAAGATTTCTCCAGCACT
GACTGATACAAAGCACAAATGAGATGCCACTTCTAGAGACAGCAGCTTCAAACCCAGAAA
AGGGTGATGAGATGAGTTTACATGCGCTAAATCAGTGGCAAAAACACAGTCTTCTTTCTTT
CTTTCTTTCAAGGAGGCAAGGAAACCAATTAAGTGGTCACCTCAACATAAGGGGGACATGA
TCCATTCTGT.AAGCAGTTCTGA.AAGCC

11778-2&30-2

CAGGAACCGGAGCCCGAGCAGTAGCTGGGTGGGCACCATGGCTGGGATCACCACCATCGA
GCCGGTGAAGCGCAAGATCCAGCTTCTGCAGCAGCAGGCAGATGATGCAGAGGAGCCGAG
CTGAGCGCCTCCAGCGAGAACTTACGGGAGAAAGCGGGGGCGGGAACAGGCTGAGGCT
GAGGTGGCCTCCTTGAACCGTAGGATCCAGCTGGTTGAAGAAGAGCTGGACCGTGCTCAG
GAGCGCCTGGCCACTGCCCTGCCAAAGCTGGAAAGCTGAAAGCTGAAAGCTGCTGATGAGAGT
GAGAGAGGTATGAAGGTTATTGAAACCGGGGCTTAAAGATGAAGAAAGATGGAAGT
CCAGGAAATCCAACCTCAAAGAAGCTAAGCACATTGCAGAAAGAGGAGATAGGAAGTATG
AAGAGGTGGCTCGTAAGTTGGTGATCATTTGAAGGAGACTTGCACGACAGAGGAACGAG
CTGAGCTGGCAGAGTCCCGTTGCCGAGAGATGGATGAGCAGATTAGACTGATGGACCAGA
ACCTGAAGTGTCTGAGTGC

FIG. 15G

11782.1.contig

ATCTACGTCATCAATCAGGCTGGAGACACCATGTTCAATCGAGCTAAGCTGCTCAATATTG
GCTTTCAAGAGGCCTTGAAGGACTATGATTACAACCTGCTTTGTGTTTCAGTGATGTGGACCT
CATTCCGATGGACGACCGTAAATGCCTACAGGTGTTTTTCGCAGCCACGGCACATTTCTGTT
GCAATGGACAAGTTCGGGTTTAGCCTGCCATATGTTCAAGTATTTTGGAGGTGTCTCTGCTCT
CAGTAAACAACAGTTTCTTGCCATCAATGGATTCCCTAATAATTATTGGGGTTGGGGAGGA
GAAGATGACGACATTTTAAACAGATTAGTTCATAAAGGCATGTCTATATCACGTCCAAATG
CTGTAGTAGGGAGGTGTGCAATGATCCGGCATTCAAGAGACAAGAAAAATGAGCCCAATC
CTCAGAGGTTTGACCGGATCGCACATACAAAGGAAACGATGCGCTTCGATGGTTTGAAC
CACTTACCTACAAGGTGTTGGATGTGAGAGATACCCGTTATATACCCAAATCAC

11782.2.contig

CTAGACCTCTAATTTAAAGGCCACAATCATGCTGGAGAATGAACAGTCTGACCCCGAGGGC
CACAGCGAATTTTAGGGAAGGAGGCCAAAGAGGTGAGAAGGGAAAGGAAAGGAAGG
AAGGAGAACAAATAAGAACTGGAGACGTTGGGTGGGTCAGGGAGTGTGGTGGAGGCTCGG
AGAGATGGTAAACAAACCTGACTGCTATGAGTTTTCAACCCCATAGTCTAGGGCCATGAG
GGCGTCAGTTCTTGGTGGCTGAGGGTCTTCCACCCAGCCCACCTGGGGGAGTGGAGTGG
GGAGTTCTGCCAGGTAAAGCAGATGTTGTCTCCCAAGTTCTGACCCAGATGTCTGGCAGGA
TAACGCTGACCTGTTCCCTCAACAAGGGACCTGAAAGTAAATTTGCTCTTTAC

11783-1 & 2

CCGAATTCAAGCGTCAACGATCCYTCCTTACCATCAAAATCAATTGCCACCAATGGTACT
GAACCTACGAGTACACCGACTAGGGCGGACTAATCTTCAACTCCTACATACTTCCCCCAT
TATTCCTAGAACCAGGCGACCTGGGACTCCTTGACGTTGACAATCGAGTAGTACTCCCGAT
TGAAGCCCCCATTCGTATAATAATTACATCAAAAGACGTCTTGCACTCATGAGCTGTCCCC
ACATTAGGCTTAAAAACAGATGCAATTCGCGGACGTCTAAGCCAAACCACTTTCACCGCTA
CAGACCGGGGGGTATACTACGGTCAATGCTCTGAAATCTGTGGAGCAAAACCACAGTTTCAT
GCCCATCGTCTCAGAAATTAATTCGCTTAAAAATCTTTGAAATAGGGCCCCGTATTTACCCTA
TAGCACCCCTCTACCCCTCTAG

11786.1.contig

GCTCTTCACACTTTTATTGTTAAATCTCTTCACATGGCAGATACAGAGCTGTGCTCTTGAAG
ACCACCACTGACCAGGAAATGCCACTTTTACAAAAATCATCCCCCTTTTCATGATTGGAAC
AGTTTCTGACCGTCTGGGAGCGTTGAAGCGTGACCAGCACATTTGCACATGCAAAAAA
GGAGTCACCCCAAGGCCTCAACCACACTTCCAGAGCTCACCATGGGCTGCAGGTGACTT
GCCAGGTTTGGGGTTCTGAGCTTTCCTTCTGCTGCGGTGCGGAGGCCCTCAAGAAGTGA
GAGGCCGGGGTATGCTTCATGAGTGTAAACATTTACGGGACAAAAGCGCATCATTAGGAT
AAGCAACAGCCACAGCACTTCATGCTTCTGAGGGTTAGCTGTAGGAGCGGGTGAAAGGAT
TCCAGTTTATGAAAAATTAAGCAAAACAACGGTTTTTACCTGGGTGGGAAACAGGAAAC
TGTGATGTGCGCCAATGACCACCAATTTCTGCCCCATGTGAAGGTCCCCATGAAACC

FIG. 15H

11786.2.contig

CAAGCGCTTGGCGTTTGGACCCAGTTTCAGTGAGGTTCTTGGGTTTTGTGCCTTTGGGGATT
TGGTTTGACCCAGGGGTCAGCCTTAGGAAGGTCTTCAGGAGGAGGCCGAGTTCCCTTCAG
TACCACCCCTCTCTCCCCACTTTCCCTCTCCCGGCAACATCTCTGGGAATCAACAGCATATT
GACACGTTGGAGCCGAGCCTGAACATGCCCCCTCGGCCCCAGCACATGGAAAACCCCTTC
CTTGCCTAAGGTGTCTGAGTTTCTGGCTCTTGAGGCAATTCAGACTTGAAATTCTCATCAG
TCCATTGCTCTTGAGTCTTTGCAGAGAACCCTCAGATCAGGTGCACCTGGGAGAAAGACTTT
GTCCCCACTTACAGATCTATCTCCTCCCTTGGGAAGGGCAGGGAATGGGGACGGTGTATGG
AGGGGAAGGGATCTCCTGCGCCCTTCATTGCCACACTTGGTGGGACCATGAACATCTTTAG
TGTCTGAGCTTCTCAAATTACTGCAATAGGA

13691.1&2

AGCGTCAAATCAGAATGGAAAAGACTCAAATCCATCATCAACACCAAGATCAAAAAGGAC
AAGRATCCTTCAAGAAACAGCAAAAACCTCCTAAAACACCAAAAGGACCTAGTTCTGTAG
AAGACATTAAAGCAAAAATGCAAGTATAGAAAAAGGTGGTTCTCTTCCCAAAGTGG
AAGCCAAATTCATCAATTATGTGAAGAAATGCTTCCGGATGACTGACCAAGAGGCTATTCA
AGATCTCTGGCAGTGGAGGAAGTCTCTTAAAGAAAATAGTTTAAACAATTTGTTAAAAAAT
TTCCGTCTTATTTCAATTTCTGTAACAGTTGATATCTGGCTGTCTTTTTATAATGCAGAGT
GAGAACTTTCCCTACCGTGTTTGATAAATGTTGTCCAGGTTCTATTGCCAAGAATGTGTTGT
CCAAAATGCCTGTTTAGTTTTAAAGATGCAACTCCACCTTTGCTTGGTTTTAAGTATGTA
TGGAAATGTTATGATAGGACATAGTAGTACCGGTGGTCAGACATGGAAAATGGTGGGSMGAC
AAAAATATACATGTGAAATAA

13692.1&2

TCCGAATTCCAAGCGAATTATGGACAAACGATTCTTTAGAGGATTACTTTTTTCAATTTT
GGTTTTAGTAATCTAGGCTTTGCTGTAAAGCAATACAACGATGGATTTTAAATACTGTTTT
TGGAATGTGTTTTAAAGCAATTGATTCTAGAACCCTTGATATTTGATAGTATTTCTAATTTT
ATTTCTTTACTGTTTGCAGTTAATGTTTCATGTTCTGCTATGCAATCGTTTATATGCACGTTT
TTTTAATTTTTAGATTTTCTGGATGTATAGTTTAAACAACAAAAAGTCTATTTAAACTG
TAGCAGTAGTTTTACAGTTCTAGCAAAAGAGCAAAAGTTGTGGGGTTAAACTTTGTATTTTCTT
TCTTATAGAGGCTTCTAAAAGGTATTTTATATGTTCTTTTAAACAAATATTGTGTACAAC
CTTTAAACATCAATGTTTGGATCAAAACAGACCCAGCTTATTTTCTGC

13693.2

TGTGGTGGCCCGGGCTGAGGTGGAGGCCAGGACTCTGACCCCTGCCCTTCAGCAA
GGCCCCCGGCACCGCCGCCACTACGAACCTGCCGTGGGTTGAAAAATATAGGCCAGTAAA
GCTGAATGAAATTTGTGGGAATGAAGACACCGTGAGCAGGCTAGAGGTCTTTGCAAGGGA
AGGAAATGTGCCCCAACATCATCATTTGGCGGGCTCCAGGAACCGGCAAGACCACAAGCAT
TCTGTGCTTGGCCCGGGCCCTGCTGGGCCAGCACTCAAAGATGCCATGTTTGGAACTCAAT
GTTTCAAATGACAGGGGCCATTGACGTTGTGAGGAATAAAATTAATTTGCTCAACAA
AAAGTCACTCTTCCCAAAGCCCGACATAAGATCATCAATCTGATGAAGCAGACAGCATG
ACCGACGGAGCCCAAGCCTTGAGGAGAACCATGCAAAATCTACTCTAAAACCACTCGT
TCGCCCTTGTGTAATGCTTCGGATAAGATCATCGAGCC

FIG. 15I

13696.1-13744.1

CTTTGCAAAGCTTTTATTTTCATGTCTGCGGCATGGAATCCACCTGCACATGGCATCTTAGCT
GTGAAGGAGAAAAGCAGTGCACGAGAAGGAATGAGTGGGCGGAACCAACGGCCTCCACAA
GCTGCCCTTCAGCAGCCTGCCAAGGCCATGGCAGAGAGAGACTGCAAACAAACACAAGCA
AACAGAGTCTCTTCACAGCTGGAGTCTGAAAGCTCATAGTGGCATGTGTGAATCTGACAA
AATTAAAAGTGTGCATAGTCCATTACATGCATAAAACACTAATAATAATCCTGTTTACACG
TGACTGCAGCAGGCAGGTCCAGCTCCACCACTGCCCTCCTGCCACATCACATCAAGTGCCA
TGGTTTAGAGGGTTTTTCATATGTAATTTCTTTTATTCTGTAAAAGGTAACAAAATATACAG
AACAAAACCTTTCCCTTTTTTAAACTAATGTTACAAATCTGTATTATCACTTGGATATAAAT
AGTATATAAGCTGATC

13700.1

CAAGGGATATATGTTGAGGGTACRGRGTGA⁻ACTGAACAGATCACAAAGCAGGAGAAACA
TTAGTTCTCTCCCTCCCCAGCGTCTCCTTCGTCTCCCTGGTTTTCCGATGTCCACAGAGTGA
GATTGTCCCTAAGTAACTGCATGATCAGAGTGCTGKCTTTATAAGACTCTTCATTACGGCT
ATCCAATTCAGCAATTGCTTCATCAAATGCCGTTTTTGGCAGGCTACAGGCCTTTTCAGGA
GAGTTTAGAATCTCATAGTAAAAGACTGAGAAATTTAGTGCCAGACCAAGACGAATTGGG
TGTGTAGGCTGCATTNCTTTCTTACTAATTTCAAATGCTTCCTGGTAAGCCTGCTGGGAGTT
CGACACAAGTGCTTTGTTTGTGCTCCAGATGCCACTTCAGAAAGATACCTAAAATAATCT
CCTTTCATTTCAAAGTAGAACAC

13700.2

TCCGGAGCCGGGGTACTGCGCGCGCGCGCGCGCGGTCCAGCCACTGCAGGCACCGCTGCC
GCGCGCTGAGTAGTGGGCTTAGGAAGCAAGAGGTATCTCGCTCGGAGCTTCGCTCGGAA
GGGTCTTTGTTCCCTCCAGCCCTCCAGCGGAATGACAAATGGATAAAAGTGAGCTGGTACA
GAAAGCCAAACTCGCTGACCAGCCTGACCGATATGATGATATGGCTGCAGCCATGAAGGC
AGTCACAGAACAGGGGCATGAACCTCTCCAACGAAGAGAGAAATCTGCTCTCTGTTGCCA
CAAGAATGTGCTAAGGCGCGCGCGCGCTCTTCTGCGCTGTCTCTCCAGCATTGAGCAGA
AAACAGAGAGGAATGAGAAACAAGCAGCAGATGGGCAAGAGTACCGTGAGAAAGATAGA
GGCAGAACTCCAGGACATCTCCAATGATGTTCTGAGCTTGTGGACAAATATCTTATTCC
AATGCTACACAACCCAGAAA

13701.1

AAAAAGCAGCARGTTCAACACAAAAATAGAAAATCTCAAATGTAGGATAGAAACAAAACCAA
GTGTGTGAGGGGGGAAGCAACAGCAAAAGGAAGCAATGAGATGTTGCAAAAAAGATGGA
GGAGGGTTCCCTCTCTCTGCGGACTGACTCAAAACACTGATGTGGCAGTATACACCAATC
CAGAGTCAGGGGTGTTCAATCTTTTGGCAGTAAGAAAAGGTGGGGATTAAGAAGACGT
TTCTGGAGGCTTAGGGACCAAGGCTGCTCTCTTCCCCCTCCCAACCCCTTGATCCCTTT
CTCTGATCAGGGGAAAGGAGCTCGAATCAGGGAGGTAGAGTTGGAAAGGGAAAGGATTC
CACTTGACAGAATGGGACAGACTCCTTCCCA

FIG. 15J

13701.2

TGGCAATAGCACAGCCATCCAGGAGCTCTTCARGCGCATCTCGGAGCAGTTCACTGCCATG
TTCCGCCGGAAGGCCCTTCCTCCACTGGTACACAGGCGAGGGCATGGACGAGATGGAGTTC
ACCGAGGCTGAGAGCAACATGAACGACCTCGTCTCTGAGTATCAAGCAGTACCAGGATGC
CACCGCAGAAAGAGGAGGAGGATTTTCGGTGAGGAGGCCGAAGAGGAGGCCTAAGGCAGAG
CCCCATCACCTCAGGCTTCTCAGTTCCCTTAGCCGTCTTACTCAACTGCCCCCTTCCTCTCC
CTCAGAAATTTGTGTTTGCTGCCTCTATCTTGTTTTTTTCTTCTGGGGGGGTCTAGAA
CAGTGCTGGCACATAGTAGGCGCTCAATAAATACTTGCTTGNTGAATGTCTCT

13702.2

AGCTGGCGCTAGGGCTCGGTTGTGAAATACAGCGTRGTCAGCCCTTGCGCTCAGTGTAGAA
ACCCACGCTGTAAAGTTCGGTCTTCGTCCATCTGCTTTTTTCTGAAATACACTAAGAGCAG
CCACAAAACCTGTAACCTCAAGGAAACCATAAAGCTTGAGTGCCTTAATTTTAAACCAGTT
TCCAATAAAACGGTTTACTACCT

13704.2-13740.2

GGAGATGAAGATGAGGAAGCTGAGTCAGCTACGGGCGAGCGGGCAGCTGAAGATGATGA
GGATGACGATGTGATACCAAGCAGCAGACCGACGAGGATGACTAGACAGCAAAAA
AGGAAAAAGTTAAA

13706.1

GATGAAAATTAATACTTAAATTAATCAAAAAGGCACTACGATACCACCTAAAACCTACTG
CCTCAGTGGCAGTAKCCTAAKCAACATCAAGCTACAGSACATYATCTAATATGAATGTTA
GCAATTACATAKCARGAAGCATGTTTGGCTTCCAGAACTATGGNACAAATGGTCATTWG
GGCCCAAGAGGATAATTTGGCCNGCAAACGATCAAGATAGATNAANGTAAAG

13706.2

GAGTAGCAACGCAAAGCGCTTGGTATTGAGTCTGTGGGSGACTTCGGTTCCGGTCTCTGCA
GCAGCCGTGATCGCTTAGTGGAGTGCTTAGGGTAGTTGGCCAGGATGCCGAATATCAAAA
TCTTCAGCAGGCAGCTCCCACCAGGACTTATCTCASAAAATTGCTGACCGCCTGGGCCTGG
AGCTAGGCAAGGTGGTGACTAAGAAATTCAGCAACCAGGAGACCTGTGTGGAAATTGGTG
AAAGTGTAACCGTGGAGAGGATGTCTACATTTGTCAGAGTGGNTGTGGCGAAATCAATGAC
AATTTAATGGAGCTTTTGATCATGATTAATGCCTGCAAGATTGCTTCAGCCAGCCGGGTTA
CTGCAGTCATCCCATGCTTCCCTTATGCCCGGCGAGGATAAGAAAGATNAGAGCCGGGCC
GCCAATCTCAGCCAAGCTTGGTGCAAAATATGCTATCTGTAGCAGTGCAGATCATATTATCA
CCATGGACCTACATGCTTCTCAAAATTCANGGCTTTTT

FIG. 15K

13707.3

ATGCAAAAGGGGACACAGGGGGTTCAAAAATAAAAAATTTCTTTCCCCCTCCCCAAACCT
GTACCCCAAGCTCCCCGACCACAACCCCTTTCCTCCCCCGGGGAAAGCAAGAAGGAGCAGG
TGTGGCATCTGCAGCTGGGAAGAGAGACGCCGGGGAGGTGCCGAGCTCGGTGCTGGTCTC
TTTCCAAATATAAAATACGTGTGTGTCAGAACTGGAAAAATCCTCCAGCACCCACCACCCAAGCA
CTCTCCGTTTTCTGCCGGTGTGTTGGAGAGGGGCGGNGGGCAGGGGCGCCAGGCACCGGCT
GGCTGCCGTCTACTGCATCCGCTGGGTGTGCACCCCGCGA

13710.2

AGGTTGGAGAAGGTCAATGCAGGTGCAGATTGTCCAGGSKCAGCCACAGGGTCAAGCCCAA
CAGGCCCAGAGTGGCACTGGACAGACCATGCAGGTGATGCAGCAGATCATCACTAACACA
GGAGAGATCCAGCAGATCCCCGGTGCAGCTGAATGCCGGCCAGCTGCAGTATATCCGCTTA
GCCCAGCCTGTATCAGGCACTCAAGTTGTGCAGGGACAGATCCAGACACTTGCCACCAAT
GCTCAACAGATTACACAGACAGAGGTCCAGCAAGGACAGCAGCAGTTCAAGCCAGTTCAC
AAGATGGACAGCAGCTCTACCAGATCCAGCAAGTCACCATGCCTGCGGGCCANGACCTCG
CCAGCCCATGTTTCATCCAGTCAAGCCAACCAGCCCTTCNACGGGCAGGCCCCCAGGTGAC
CGGCGACTGAAGGGCCTGACCTGGCAAGGCCAANGACACCCAACACAAATTTTTGCCATAC
AGCCCCCAGGCAATGGGCACAGCCTTTCTTCCAGAGGAC

13710-1

TGAGATTTATTGCAATTCATGCAGCTTGAAGTCCATGCCAAAGGRCAGTACAGTTTTTTA
ATGCCATTTAAAAATAAAACGGAGGTGGGCAACACACAAAGTCTAGTTTCCTGGG
TCCCTGGGAGAAAAGAGTGTGGCAATGAATCCACCCACTCTCCACAGGGAATAAATCTGT
CTCTTAAATGCCAAACAATGTTTCCATGGCCTCTGGATGCCAAATACACAGAGCTCTGGGGT
AGAGCAAGGGATGGGGAGAGGACCAGGAGTGAATAAGCAGCTACACACATTCACCTAAT
TCCATCTGAGGGCAAGAACAACGTGGCAAGTCTTGGGGTAGCAGCTGTT

13711.1

TCCAGACATGCTCCTGTCTAGGCGGGGACCAGGAACCAGACCTGCTATGGGAAGCAGAA
AGAGTTAAGGGAAGGTTTCCTTTCATTCCTGTTCTTCTTTTGCCTTTGAACAGTTTTTA
AATATACTAATAGCTAAGTCAATTCGCCAGCCAGGTCCCCGGTGAACAGTAGACAACAAGGA
GCTTGCTAAGAATTAATTTTCTGT.TTTT.CACCCCA.TTC.AA.ACAGAGCTGCCCTGTTCCCTG
ATGGAGTTCCATTCCTGCCAGGGCAGGCTGAGTAACACGAAGCCATTCAAGAAAGGCGG
GTGTGAATCACTGCCACCCCATGGACAGACCCCTCACTCTTCTTCTTACCCGCAGCGCT
ACTTAATAAATAATAATATACTTTGAAATTAATGA.AACCGA.TTTTCCCATGCGGCATCTA
ACGGCACTTGCCAGCTCTTATCCGGACAGTCAAGCACTGTTGTTGGACAACAGATAAAGG
AAAGAAAAAGAAAGAAACACCCCAACTTCTGT

FIG. 15L

13711.2

TGAGACGGACCACTGGCCTGGTCCCCCTCATKTGCTGTCTGTAGGACCTGACATGAAACGC
AGATCTAGTGGCAGAGAGGAAGATGATGAGGAACTTCTGAGACGTGGCAGCTTCAAGAA
GACCAATTAATGAAGCTTAACCTCAGGCCTGGGACAGTTGATCTTGAAAGAAGAGATGGAG
AAAGAGAGCCGGGAAAGGTCACTCTGTAGCCAGTGGCTACGATTCTCCCATCAACTCAG
CTTCACATAATCCATCATCTAAAACTGCATCTCTCCCTGGCTATGGAAGAAATGGGCTTCA
CCGGCCTGTTTCTACCGACTTCGCTCAGTATAACAGCTATGGGGATGTCAGCGGGGGAGTG
CGAGATTACCAGACACTTCCAGATGGCCACATGCCCTGCAATGAGAATGGACCGAGGAGTG
TCTATGCCCCAACATGTTGGAACCAAGATATTTCCATATGAAATGCTCATGGTGACCAACA
GAGGGCCGAAACCAAAATCTCAGAGAGGTGGACAGAA

13713.1&2

TCACTTTATTTTTCTTGTATAAAAAACCTATGTTGTAGCCACAGCTGGAGCCTGAGTCCGCT
GCACGGAGACTCTGGTGTGGGTCTTGACGAGGTGGTCAGTGAACTCCTGATAGGGAGACT
TGGTGAATACAGTCTCCTTCCAGAGGTGCGGGGTCAGGTAGCTGTAGGTCTTAGAAATGGC
ATCAAAGGTGGCCTTGGCGAAGTTGCCAGGGTGGCAGTGCAGCCCCGGGCTGAGGTGTA
GCAGTCATCGATACCAGCCATCATGAG

13715.4

CTGGAATATAGACCCGTGATCGACAAAACCTTGAACGAGGCTGACTGTGCCACCGTCCCCG
CAGCCATTGCTCCTACTGATGACACAAGATGTGGTGATGACAGAATCAGCTTTGTAAAT
ATGTATAATACCTCATGCATGTGTCCATGTCTATAACTGTCTTCATACGCTTCTGCACTCTGG
GGAAGAAGGAGTACATTGAAGGGAGATTGGCACCTAGTGGCTGGGAGCTTGGCAGGAACC
CAGTGGCCAGGGAGCGTGGCACTTACCTTTGTCCCTTGCTTCAATCTTGTGAGATGATAAA
ACTGGGCACAGCTCTTAAATAAAATATAAAATGAACA

13717.1&2

TGAATGGGGACGAGCTGACCCAGGAAATGGAGCTTGNNGGAGACCAGGCCTGCAGGGGAT
GGAACCTTCCAGAAGTGGGCATCTGTGGTGGTGGCTCTTGGGAAGGAGCAGAAGTACACA
TGCCATGTGGAACATGAGGGGCTGCCTGAGCCCCCTCACCTGAGATGGGGCAAGGAGGAG
CCTCCTTCATCCACCAAGACTAACACAGTAATCATTTGCTGTTCCGGTTGTCTTGGAGCTGT
GGTCATCCTTGGAGCTGTGATGGCTTTGTGATGAAGAGGAGGAGAAACACAGGTGGAAA
AGGAGGGGACTATGCTCTGGCTCCAGGCTCCAGAGCTCTGATATGTCTCTCCAGATTGT
AAAGTGTGAAGACAGCTGCCCTGGTGTGGACTTGGTGACAGACAATGTCTTCACACATCTCC
TGTGACATCCAGAGACCTCAGTTCTCTTAAGTCAAGTGTCTGATGTTCCCTGTGAGTCTGCG
GGCTCAAAGTGAAGAAGTGTGGAGCCCCAGTCCACCCCTGCACACCAGGACCTATCCCTG
CACTGCCCTGTGTCTCCCTTCCACAGCCAACCTTGGCTGCTCCAGCCAAACATTGGTGGACAT
CTGCAGCCTGTGAGCTCCATGCTACCTGACCTTCAACTCCTCACTTCCACACTGAGAATA
ATAATTTGAATGTGGGTGGCTGGAGAGATGGCTCAGCGCTGACTGCTCTTCCAAAGGTCT
GAGTTCAAATCCCAGCAACCACATGGTGGCTCACAACCATCTGTAATGGGATCTAATACCC
TCTTCTGCACTGTCTGAAGACASCTACAGTGTACTTACATATAATAATAAATAAG

FIG. 15M

13719.1&2

GGCCGGGCGCGCGCGCCCCCGCCACACGCACGCCGGCGTCCAGTTTATAAAGGGAGAG
AGCAAGCAGCGAGTCTTGAAGCTCTGTTTGGTGCTTTGGATCCATTTCCATCGGTCTTAC
AGCCGCTCGTCAGACTCCAGCAGCCAAGATGGTGAAGCAGATCGAGAGCAAGACTGCTTT
TCAGGAAGCCTTGGACGCTGCAGGTGATAAACTTGTAGTAGTTGACTTCTCAGCCACGTGG
TGTGGGCTTGCAAAATGATCAAGCCTTTCTTTCAATCCCTCTCTGAAAAGTATTCCAACGT
GATATTCCTTGAAGTAGATGTGGATGACTGTCAGGATGTTGCTTCAGAGTGTGAAGTCAAA
TGCATGCCAACATTCCAGTTTTTTAAGAAGGGACAAAAGGTGGGTGAATTTTCTGGAGCCA
ATAAGGAAAAGCTTGAAGCCACCAATTAATGAATTAGTCTAATCATGTTTTCTGAAAATATA
ACCAGCCATTGGCTATTTAAAACCTTGTAATTTTTTAAATTTACAAAATATAAAATATGAA
GACATAAACCCMGTTGCCATCTGCGTGACAATAAAACATTAATGCTAACACTT

13721.1

TCACATAAGAAATTTAAGCAAGTTACRCTATCTTAAAAAACACAACGAATGCATTTTAATA
GAGAAACCTTCCCTCCCTCCACCTCCCTCCCCACCTCCTCATGAATTAAGAATCTAAG
AGAAGAAGTAACCATAAAACCAAGTTTGTGGAATCCATCATCCAGAGTGCTTACATGGT
GATTAGGTAAATATTGCTTCTTACAAAATTTCTATTTTAAAAAAAATTATAACCTTGATTG
CTTATTACAAAAAATTCAGTACAAAAGTTCAATATATTGAAAAATGCTTTTCCCTCCCT
CACAGCACCGTTTTATATATAGCAGAGATAAATGAAGAGATTGCTAGTCTAGATCGGGCA
ATCTTCAAATTACACCAAGACCCACAGTGGTTTTATTACCCTCCCTTCTCATAAG

13721.2

GGAAAGGATTCAAGAAATAGAGGACTTGGCTTGGCTRRAGAAAAAGACAACCTCTCGTCCCAT
GCTGACAGACAAAGACAGAGAGATGGCCGAAATAAGGGATCAAATGCAGCAACAGCTGA
ATGACTATGAACAGCTTCTTGAATGTAAGTTAGCCCTGGACATGGAAATCAGTGCTTACAG
GAAACTCTTAGAAGGCCAAGAAGACAGGTTGAAGGTGTCTCCAAGCCCTTCTTCCCGTGT
GACAGTATCCCGAGCATCTCAAGTCTAGTGTACCGTACAACCTACAGGAAGCGGAAGA
GGGTTGATGTGGAAGAATCAGAGCCGAAGTAGTAGTGTAGCATCTCTCATTCGGCTCAA
CCACTGGAAATGTTTGCATCGAAGAAAATGATGTTGATGGGAAATTTATCCCGCTTGAAGA
ACACTTCTGAACAGGATCAACCAATGGGAAGCCTTGGGAGATGATCAGAAAAATTGGAGA
CACATCAGTCAGTTATAAATATACCTCAA

13723.1

CATGGGTTTCACCAGGTTGGCCAGGCTGCTTGAACCTCTGACCTCAGGTGATCCACCCG
CCTCGGCCCTCCCAAAGTCTGGGATTACAGCGGTGACCCACCACGCGCGGCCCCCAAAGC
TGTTTCTTTTGTCTTTAGCGTAAAGCTCTCTCCCATGCAATCTACATAACTGACGTGAC
TGCCAGCAAGCTCAGTCACTCCGCTGCTTTTCTCTTTCCAGTTCTTCTCTCTCTCAAG
TTCTGCCTCAGTGAAGCTGCAGCTCCCCAGTTAAGTGATCAGGTGAGGGTTCTTTGAACC
TGGTTCTATCAGTCGAATTAATCCTTCATCATGG

FIG. 15N

13723.2

GATGTGTTGGACCCTCTGTGTCAAAAAAACCTCACAAAGAATCCCTGCTCATTACAGAA
GAAGATGCAATATAAATATGGGTTATTTTCAACTTTTTATCTGAGGACAAGTATCCATTAA
TTATTGTGTCAGAAGAGATTGAATACCTGCTTAAGAAGCTTACAGAAGCTATGGGAGGAG
GTTGGCAGCAAGAACAATTTGAACATTATAAAATCAACTTTGATGACAGTAAAAATGGCC
TTCTGTCATGGGAACCTTATTGAGCTTATTGGAATGGACAGTTTAGCAAAGGCATGGACCG
GCAGACTGTGTCATATGGCAATTAATGAAGTCTTTAATGAACCTTATATTAGATGTGTTAAAG
CAGGGTTACATGATGAAAAAGGGGCCACAGACGGAAAAAAGTGGACTGAAAGATGGTTTGTA
CTAAAACCCAACATAATTTCTTACTATGTGAGTGAGGATCTGAAGGATAAGAAAGGAGAC
ATTCTCTTGGATGAAAAATTGCTGTGTAGAAGTCCTTGCTGACAAAAGATGGAAAGAAAT
GCCTTTT

13725.1

GA CTGGTTCTTTATTTCAAAAAAGACACTTGTCAATATTCAGTRTCAAAACAGTTGCACTATT
GATTTCTCTTTCTCCCAATCGGCCCCAAAGAGACCACATAAAAAGGAGAGTACATTTTAAGC
CAATAAGCTGCAGGATGTACACCTAACAGACCTCCTAGAAACCTTACCAGAAAAATGGGGA
CTGGGTAGGGAAGGAACTTAAAAAGATCAACAAACTGCCAGCCACGGACTGCAGAGGCT
GTCACAGCCAGATGGGGTGGCCAGGGTGGCCACAAACCCAAAGCAAAAGTTTCAAAATAATA
TAAAAATTTAAAAAGTTTTGTACATAAGCTATTCAAGATTTCTCCAGCACTGACTGATACAA
AGCACAATTGAGATGGCACTTCTAGAGACAGCAGCTTCAAACCCAGAAAAGGGTGATGAG
ATGAAGTTTACATGGCTAAATCAGTGGCAAAAACACAGTCTTCTTTCTTTCTTTCTTCAA
GGANGCAGGAAAGCAATTAAGTGGTCACCTTAACATAAGGGGGAC

13725.2

TGGGTGGCCACCATGGCTGGGATCACCACCATCGAGGCGGTGAAGCCCAAGATCCAGGTT
CTGCAGCAGCAGGCAGATGATGCAGAGCAGCGAGCTGACCGCCTCCAGCGAGAAGTTGA
GGGAGAAAAGCGGGGGCCGGGAACAGGCTGAGGCTGAGGTGGCCTCCTTGAACCGTAGGA
TCCAGCTGCTTGAAGAAGAGCTGGACCGTGGCTCAGGAGCGCCTGGCCACTGCCCTGCAAA
AGCTGGAAAGAAGCTGA AAAAGCTGCTGATCAGACTGAGAGAGGTATGAAGGTTATTGAA
AACCGGGCCTTAAAAGATGAGAAAAGATGCAACTCCAGGAAATCCAACCTCAAAGAAGC
TAAGCACATTGAGAGAGAGGCAGATAGGAAGTATGAAGAGGTGGCTCGTAAGTTGGTGAT
CATTGAAGGAGACTTGAACCCGACAGAAAGGAACGAGCTTGACCTTGGCAAAAAGTCCCGT
TGCCACAGAGATGGGATGAACCCAGATTAGACTGATGGACCANAACC

13726.1&2

AGGGGCGNCGGGGTGCGTGGGCCCCTGGGTGACCGACTTAGCCTGGCCAGACTCTCAGCAC
CTGGAAGCGCCCCGAGAGTGACAGCCTGAGGCTGGGAGGGAGGACTTGGCTTGAGCTTGT
TAAACTCTGCTCTGAGCCTCCTTGTGGCCTGCAATTAGATGGCTCCCGCAAAGAAGGGTGG
CGAGAAGAAAAAGGGCCGTTCTGCCATCAACGAAGTGGTAACCCGAGAAATACACCATCAA
CAATTCACAAGCGCATCCATGGAGTGGCTTCAAGAAGCGTGACCTCGGGCACTCAAAGA
GATTGCGAAAATTTGCCATGAAGGAGATCGGAACCTCCAGATGTCCGCATTGACACCAGGCT
CAACAAAGCTGTCTGGGCGCAAGCAATAAGGAATGTGCCATACCGAATCCGGTGTGGGGC
TGTCACAGAAAACGTAAATCAGGATGAAGATTACCAAAATAAGCTATATACTTTGGTTACCTA
TGTACCTGTTACCACTTTCAAAAAATCTACAGACAGTCAATGTGGATGAGAACTAATCGCTG
ATCGTCAGATCAAAATAAAGTTATAAAAT

FIG. 150

13727.1

TCGGGAGCCACACTTGGCCCTCTTCTCTCCAAAGSGCCAGAACCTCCTTCTCTTTGGAGAA
TGGGGAGGCCCTCTTGGAGACACAGAGGGTTTCACCTTGGATGACCTCTAGAGAAAATTGCC
CAAGAAGCCACCTTCTGGTCCCAACCTGCAGACCCACAGCAGTCAGTTGGTCAGGCCCT
GCTGTAGAAGGTCACTTGGCTCCATTGCCTGCTTCCAACCAATGGGCAGGAGAGAAGGCC
TTTATTTCTCGCCACCCATTCTCTCTGTACCAGCACCTCCGTTTTAGTCAGTGTTGTCCA
GCAACGGTACCGTTTACACAGTCACCTCAGACACACCAATTCACCTCCCTTGCCAAAGCTGT
TAGCCTTAGAGTGATTGCAGTGAACACTGTTTACACACCGTGAATCCAATCCCATCAGTCC
ATTCCAGTTGGCACCAGCCTGAACCAATTTGGTACCTGGTGTAACTGGAGTCCTGTTTACA
AGGTGGAGTCGGGGCTTGCTGACTTCTCTTCAATTGAGGGCAC

13727.2

ACCTAGACAGAAGGTGGGTGAGGGAGGACTGGTAGGAGGCTGAGGCAATTCCTTGGTAGT
TTGTCCTGAAACCCTACTGGAGAAGTCAGCATGAGGCACCTACTGAGAGAAGTGCCCAAGA
AACTGCTGACTGCATCTGTAAAGAGTTAACAGTAAAGAGGTAGAAGTGTTTCTGAATCA
GAGTGGAAAGCGTCTCAAGGGTCCCAAGTGGAGGTCCCTGAGCTACCTCCCTTCCGTGAGT
GGGAAGAGTGAAGCCCATGAAGAAGTGAAGCAAGGATGGGGTTCCTGGGGCTCCA
GGCAAGGGCTGTGCTCTCTGCAGCAGGGAGCCCCACGAGTCAGAAAGAAAGAACTAATCA
TTTGTTCAGAAACCTTGCCCCGATACTAGCGGAAAAGTGGAGGCGGNGGTGGGGGCAC
AGGAAAGTGGAAGTGATTTGATCGAGAGCAGAGAAGCCTATGCCACAGTGGCCGAGTCCAC
TTGTAAGTG

13728.1&2

TTCAAGCAATTGTAACAAGTATATCTAGATTAGAGTGAGCAAAATCATATACAAATTTTCAT
TTCCAGTTGCTATTTTCCAAATTTGTTCTGTAAATGTCGTTAAAATTACTTAAAAATTAACAAA
GCCAAAAATATAATATGACAAGAAAGCCATCCCTACATTAATCTTACTTTTCCACTCAC
CGCCCCATCTCTCTCTCTTTTCTTAACTATGCCATTAATAAAGTGTCTACTGGGCGGGCG
TGTGGCTCATGCCGTGTAATCCAGCAATTTGGGAGGCCAAGGCAGGCGGATCATGAGGTC
AAGAGATTGAGACCATCCTGGCCAAACATGGTCAAAACCCCGCCTCGACTAAGAATACAAA
ATTAGCTGGGCATGGTGGCCATGCCGTGACTCTCAGCTACTCGGGAGGCTGAGGCAGAA
GAATCGCTTGAACCCGGGAGGCAGAGGATGCAAGTGGAGCCCCGATCGGCCACTGCACTCT
AGCCTGGGCGACAGACTGAGACTCTGCTC

13731.1&2

TGTGCCAGTCTACAGCCCTATCAGCAGCCGACTCCTTCAGCAACAGATGGGGTCCCTGTTC
AGCCCAACCCCATGAGCCCCAGCAGCATATGCTCCCAATCAGGCCAGTCCCCACACCT
ACAAGGCCAGCAGATCCCTAAATCTCTCTCCAAATCAAGTGGCTCTCCCCAGCCTGTCCCTT
CTCCACGCCACAGTCCCAAGCCCCCACTCCAGTCTTCCCCAAGGATGCAGCCTCAGCC
TTCTCCACACCAGTTTCCCCACAGACAAGTTCCCCACATCCTGGACTGGTAGTTGCCAG
GCCAACCCCATGGAACAAGGGCAATTTGCCAGCC

FIG. 15P

13734.1&2

TGTA AAAA ACTTGT TTTTA A TTTTGTATA AAAATAAAGGTGGTCCATGCCCACGGGGGCTGTAGGAAATCCAAGCAGACCACTGGGGTGGGGGGATGTAGCCTACCTCGGGGGACTGTCTGTCTCAAAAACGGGCTGAGAAGGCCCGTCAGGGGCCAGGTCCCACAGAGAGGCCTGGGATCTCCCCAACCCGAGGGGCAGACTGGGCAGTGGGGAGCCCCCATCGTGCCCCAGAGGTGCCACAGGCTGAAGGAGGGGCCTGAGGCACCGCAGCCTGCAACCCCCAGGGCTGCAGTCCACTAACTTTTTACAGAAATAAAAGGAACATGGGGATGGGGAAAAAAGCACCAGGTCAAGGCAAGGGCCGAGGGCCCCAGATCCCAGGAGGCCCGCCACGGATTGGCACAGGCCGCTGCTGGCCAGCTCCACAGCTCCTGGCACAGGAGGCCCGCCACGGATTGGCACAGGCCGCTGCTGGCCATCACGCCACATTTGGAGAACTTGTCCCGACAGAGGTCAAGCTCGGAGGAGCTCCTCGTGGGACACACTGTACGAACACAGATCTCCTTGTTAATGACGTACACACGGCGGAGGCTGCGGGACAGGGCACGGGAGGTCTCAGCCCCACTT

13736.2

ATGGCTGCTGGATTTACGTGGTAATAGGGGCTGTGGGCCATAAATCTGAAGCCTTGAGAACCTTGGGTCTGGAGAGCCATGAAGAGGGAAGGAAAGAGGGCAAGTCTCTGAACCTAACC AATGACCTGATGGATTGCTCGACCAAGACACAGAAGTGAAGTCTGTGTCTGTGCACTTCCACAGACTGGAGTTTTTGGTGCTGAATAGAGCCAGTTGCTAAAAAATTGGGGGTTTGGTGAAGAAATCTGATTGTTGTGTGTATTCAATGTGTGATTTTAAAAATAAACAGCAACAACAATAAAAACCTGACTGGCTGTTTTTCCCTGTATTCTTTACAACCTATTTTTTGACCCTCTGAAAA TTATTATACTTCACCTAAAATGGAAGACTGCTGTGTTTGTGGAAATTTTGTAAATTTTTTAATTTATTATCTCTCTCTCTTTTATTTTCCCTGCAGAAATCCGTTGAGAGACTAATAAGGCTTATATTTAATTGATTTGT.TAATATGTATATAAAT

13744.2-13696.2

GGCATGCGAGCCCACTCGGCGGACCCAAAGGGCGGGCGGGAGGCACACGGAGCACTGCCAGGCGCCGGGTTGGGACAGCCGCTCTTCCCTGCTGCTGGATAGTCGTGTTTTCGGGGATCGAGGATCTCACCAGAAACCGAAATAATGCCGAACCAATCAATGTCCGAGTTACCACCATGGATGCCAGGCTGGAGTTTGCAATCCAGCCAAATACAACCTGGAAAACAGCTTTTTGATCAGGTGGTAAGACTATCGGCCTCCGGGAAGTGTGCTACTTTGGCCTCCACTATGTGGATAATAAAGGATTTCCCTACCTGGCTGAAGCTGCATAGAAAGGTGCTGCCCCAGGAGGTCAAGGAAGGAGAATCCCTCCAGTTCAAGTTCCGGGCCAAAGTTCTACCTGAAGATGTGGCTGAGGAGCTCATCCAGGACATCACCCAGAAACTTTCTTCCCTCAAGTGAAGGAAGGAATCCTTAGCGATGAGATCTACTCCCCCCTTGARACTCCCGTGTCTTGGGGTCCCTACGCTTGTCATGCCAAAGTTTGGGGACTACCACCAAGAAG

13746.1&2-13720.1&2

GAAGGAGTGGGATACTCAGCAATGATGCCACCCCAATTTCAAAGCGGCATTCTTCGGCAGGTCTCTGGGACAAATCTCTAGGGTCACTACCTGCAAACTCGTTAGGGTACAACCTGAATGCTGAAAGGAAAGAACACCTGCCAGAACGGACAGAAATTCACCCCGGGGATCAGCTGATTGATCTCGGTCCAGCAGAAGTCAATGGCTAAAGATCAGCAGGACGTTGTCAATTCCTTGGGCTTTTGAAGTGAGTCCAGCAGCACTGTGAGGTATTCGGGCGGTTATGCCACCTGGACCACAGCAACAGCTCCCCGGGGGGGGCCAGGTGCCAGCCTATCTACATTCCTCAGGGTCTGATCAAAGTTCAGCTGGTACACCAGGGACCGGTACCCGAGCGTCAGGTGTCCGCTCGGGCTGGGGGACC GCCGGGACCAGGGAAGCCGGCCGACAGGTTGACACCTGCGGATGCCACACGCCACAGAGGGGTGCTCCCCACCGCGGGCCCGGGCACCCCGCGCGGCTTCGGCGTCCACCAACGGTGGGGGAGGGCCTCGTTCTTCTTCTGTCGCCAATTCCTGCTCCAGAGGACGAAGCCGCAGGCGGCCACCAGAGCGCTCAGGATTAGCACCTTCGGTTTGTAGATGCCGAACCTCATGGTCTCCAGGCCCGGAGCGGAGCTACAGCTCGAGCCTCGGCGCCCGGCTAGGAGCCCGGCTCGGCTTCGTCTCGGTCTCTCCATTCAGCACCAAGGGTCCCGGAAAAAGCTCAGCCSCGGTCCCAA CCGCACCTAGCTTCGTTACCTGCGCCTCGCTTC

FIG. 15Q

14347.1

CAGATTTTATTTGTCAGTCGTCCTGGGGCCGTTTCTTGCTGCTTATTTGTCTGCTAGCCTG
CTCTTCCAGCTGCATGGCCAGGCGCAAGGCCTTGATGACATCTCGCAGGGCTGAGAAATGC
TTGGCTTGCTGGGCCAGAGCAGATTCCGCTTTGTTTACAAAAGGTCTCCAGGTCATAGTCTG
GCTGCTCGGTTCATCTCAGAGAGCTCAAGCCAGTCTGGTCTTGTGTATGATCTCCTTGAG
CTCTTCCATAGCCTTCTCCTCCAGCTCCCTGATCTGAGTCATGGCTTCGTTAAAGCTGGACA
TCTGGGAAGACAGTTCTCCTCTTCTTGGATAAAATTGCCTGGAATCAGCGCCCCGTTAGA
GCAGGCTTCCATCTCTTCTGTTTCCATTTGAATCAACTGCTCTCCACTGGGCCCCACTGTGGG
GGCTCAGCTCCTTGACCCTGCTGCATATCTTAAGGGTGTTTAAAGGATATTCACAGGAGCT
TATGCCTGGT

14347.2

CTCCTCTTGGTACATGAACCCAAAGTTGAAAGTGGACTTAACAAAGTATCTGGAGAACCAA
GCATTCTGCTTTGACTTTGCATTTGATGAAACAGCTTCGAATGAAGTTGTCTACAGGTTTAC
AGCAAGGCCACTGGTACAGACAATCTTTGAAGGTGGAAAAGCAACTTGTITTTGCATATGG
CCAGACAGGAAGTGGCAAGACACATACTATGGGCGGAGACCTCTCTGGGAAAGCCCCAGAA
TGCATCCAAAGGGATCTATGCCATGGCCTTCCGGGACGTCTTCTTCTGAAGAATCAACCT
GCTACCGGAAGTTGGGCTGGAAGTCTATGTGACATTCTTCGAGATCTACAATGGGAAGCT
GTTTGACCTGCTCAACAAGAAGCCCCAAGCTTGGCGTGCTGGAAGACGGCAAGCAACAGG
TGCAAGTGGTGGGGCTTGCAGGAACATCTGGNTAACTCTGCTTGATGATGGCANTCAAG
ATGATCGACATGGGCAGGCGCTCCAGA

14348.1&14350.1&2

TCCCGAATTCAGCGACAAAATGGAWAGTGAATGGAAGATGCCTATCATGAACATCAGG
CAAACTTTTCCGCCAAGATCTGATGAGACGACAGGAAGAAATTAAGACGCATGGAAGAAC
TTCACAATCAAGAAAATGCAGAAACGTAAAGAAAATGCAATGAGGCAAGACGAGGAACGA
CGTAGAAGAGAGGAAGAGATGATGATTCGTCAACGTGAGATGGAAGAACAATGAGGCG
CAAAGAGAGGAAGGTTACAGCCGAAATGGGCTACATGGATCCACGGGAAAGAGACATGC
GAATGGGTGGCGGAGGAGCAATGAACAATGGGAGATCCCTATGGTTACGGAGGCCAGAAA
TTTCCACCTTAGGAGGTGCTGCTGCCATAGGTTATGAAGCTAATCCTGGCGTTCCACCAG
CAACCATGAGTGGTTCCATGATGGCAAGTGACATGCGTACTGAGCGCTTTGGGCAGGGAG
GTGCGGGGCTGTGGGTGGACAGGGTCTAGAGGAATGGGGCCTGGAATCCAGCAGGAT
ATGCTAGAGGGAGACAAGAGTACCAAGGC

14349.1&2

TTCGTGAAGACCCTGACTGGTAAGACCATCACTCTCGAAGTGGAGCCCCGAGTGACACCAAT
GAGAATGTCAAGGCCAAAGATCCAAAGACAAGGAAGGCATCCCTCCTGACCAGCAKAGGTTG
ATCTTTGCTGGGAAACAGCTGGAAGATGGACGCACCTGTCTGACTACAACATCCAGAAA
GAGTCCACCCTGCACCTGGTGTCTGCTGACAGGCTGGGATGCAAACTCTTGTGAAGACCC
TGACTGGTAAGACCATCACCTGAGGTTGAGCCCAAGTGACACCATCGAGAAATGTCAAGG
CAAAGATCCAAGATAAGGAAGGCATCCCTCCTGATCAGCAGAGGTTGATCTTTGCTGGGA
AACAGCTGGAAGATGGACGCACCTGTCTGACTACAACATCCAGAAAGAGTCCACTCTGC
ACTTGGTCTGCGCTTACGGGGGGCTGTCTAAGTTTCCCTTTTAAAGGTTTCAACAAATTC
ATTGCACTTTCCTTTCAATAAAGTTGTTGCATT

FIG. 15R

14352.1&2

GCGCGGGTGCCTGGGCCA.CTGGGTGACCGACTT.AGCCTGGCCAGACTCTC.AGCACCTGGA.
 AGCGCCCCGAGAGTGAC.AGCGTGAGGCTGGGAGGGAGGACTTGGCTTGAGCTTGTTAAAC
 TCTGCTCTG.AGCCTCCTTGTCGCTGCA.TTTAGATGGCTCCCGCAAAGAAGGGTGGCGAGA
 AGAAAAAGGGCCGTTCTGCC.ATCAACGAAGTGTAACCCGAGAATACACCATCAACATTC
 ACAAGCGCATCCATGGAGTGGGCTTCAAGAAGCGTGCACCTCGGGCACTCAAAGAGATTC
 GGAAATTTGCCATGAAGGAGATGGGA.ACTCC.AGATGTGCCATTTGACACCAAGGCTCAACA
 AAGCTGTCTGGGCCAAAGGAAT.AAGGAATGTGCCATACCGAATCCGTGTGCGGCTGTCCA
 GAAAACGTAATGAGGATGAAGATTC.ACC.AAATAAGCTATATACTTTGGTTACCTATGTACC
 TGTTACCACTTTCAAAAA.TCTACAGACAGTCAATGTGGATGAGAACTAATCGCTGATCGT

14353.1

AATTCCTTTATTTAAATCAACAACTCATCTTCTCAAGCCCCAGACCATGGTAGGCAGCCC
TCCCTCTCCATCCCCCTACCCCCACCCCTTAGCCACAGTGAAGGGAATGGAAAATGAGAAGC
CACGAGGGCCCCCTGCCAGGGAAGGCTGCCCCAGATGTGTGGTGAGCACAGTCAGTGCAGC
TGTGGCTGGGGCAGCAGCTGCCACAGGCTCCTCCCTATAAAATTAACTTCTGCAGCCACAG
CTGTGGGAGAAGCATACTTGTAGAAGCAAGGCCAGTCCAGCATAGAAGGCAGAGGCAG
CATCAGTGACTCCCAGCCATGGAAAGAAAGGAGGACACAGAGCTCAGAGACAGAACAGG
CCAGGGGGAAGAAGGAGAGACAGAAATAGGCCAGGGCATGGCGGTGAGGGA

14353.2

TGATGAATCTGGGTGGCCTGGCAGTAGCCCCGAGATGATGGCCTCTTCTCTGGGGATCCCA
 CTGGTTCCCTAAGAAATCCAACGAGAATCTCTGGAACTTCTCGGATAACCAGCTGCAAGA
 GCGCAAGAACGTGATCGGGTTACAGATGGGCACCAACCGCGGGCGTCTCANGCAGGCAT
 GACTGGCTACGGGATGCCAGGCCAGATCCTCTGATCCCAACCCAGGCCCTTCCCCCTGCCCT
 CCCACGAATGGTTAATATATATATAGATATATATTTTAGCAGTGACATTCGAGAGAGCCC
 CAGAGCTCTCAAGCTCCTTCTCTCAGGCTGGGGGTTCAAGCCTGTCTGTACCTCTGA
 AGTGCCTGCTGGCATCCTCTCCCCCATGCTTACTAATACATTCCCTTCCCCATAGCC

17182.1 & 2

[illegible]

FIG. 15S

17183.2

GGTTCACAGCACTGCTGCTTGTGTGTTGCCGGCCAGGAATCCAGGCTCACAAGGCTATCT
TAGCAGCTCGTCTCCGGTTTTAGTGCCATGTTTGAACATGAAATGGAGGAGAGCAAAAA
GAATCGAGTTGAAATCAATGATGTGGAGCCTGAAGTTTTTAAGGAAATGATGTGCTTCATT
TACACGGGGAAGGCTCCAAACCTCGACAAAAATGGCTGATGATTTGCTGGCAGCTGCTGAC
AAGTATGCCCTCGAGCGCTTAAAGGTCAATGTGTGAGGATGCCCTCTGCAGTAACCTGTCCG
TGGAGAACGCTGCAGAAATTCATCCTGGCCGACCTCCACAGTGCAGATCAGTTGAAAA
CTCAGGCAGTGGATTTCAATCAACTATCATGCTTCGGATGTCTTGGAGACCTCTTGGG

17186.1&2

TCGTAGCCATTTTTCTGCTTCTTTGGAGAATGACGCCCACTGACTGCTCATTTGTCGTTGGT
TCCATGCCAATTGGTGAATAGAACCTCATCCGGTAGTGGAGCCGGAGGGACATCTTGTG
ATCAACGGTGATGGTGGGATTTGGAGCATACCAGAGCTTGGTGTCTCGCCATACAGGGCA
AAGAGGTTGTGACAAAGAGGAGAGATACGGCATGCCTGTGCAGCCCTGATGCACAGTTCC
TCTGCTGTGTAATCTCCACTGCCACGCCGGAGGGGCTCCCTGTCCGACAGATAGAAGATCA
CTTCCACCCCTGGCTTG

17187.1&2

TGGCACACTGCTCTTAAGAACTATGAWGATCTGAGATTTTTTGTGTATGTTTTTACTCT
TTTGAGTGGAATCATATGTGTCTTATAGATGTACATACCTCCTTGCACAAATGGAGGGG
AATTCATTTTCATCACTCGGAGTGTCTTAGTGTATAAAAACCATGCTCGTATATGGCTTC
AAGTTGTAAAAATGAAAGTCACTTAAAGAAAAATAGGGGATGGTCCAGGATCTCCACTG
ATAAGACTGTTTTTAAGTAACCTAAGGACCTTTGGGTCTACAAGTATATGTGAAAAAAATG
AGACTTACTGGGTGAGGAAATTCATTTGTTTAAAGATGGTGGTGTGTGTGTGTGTGTGTGTG
TGTGTTG
ACTGKGTAAATATATGTGTGATAATGATTTGCTYTTTGVCMACATAAAATTACGVCTGTATA
AGTWCTARATGCMTCCTCGGKGTGTGATTTCCMAGATATTGATGATAMCCCTTAAATTT
GTAACCYGCCTTTTTCCCTTTGCTYTCMATTAAGTCTATTTCMAAAG

17191.1&39.1

GGGGGTAGGCTCTTTATACACGGTTATGCTGTACTACAGGCTCAGAGTGCAGTGTAAAGC
AGTGTCAAGAGGCCCCGGTTACGCCCAAGAATGTGGATTTTCTCTCCCTATTGATCACAGTG
GGTGGTTTTCTTCAGAAAAGCCCCAGAGCCAGGGACCAGTGAGCTCCAAGGTTAGAAGTG
GAACTGGAAGGCTTCAGTCACATGCTGCTTCCACGGCTTCCAGGCTGGCCAGCAAGGAGGA
GATGCCCCATGACGTGCCAGGTGTGCCCATCTGACACCAGTGAAGTCTGGTAGGACAGCAG
CCGCACGCCCTGCCCTCTGCCAGGAGGCCAATCATGGTAGGCAGCATTGCAGGGTCAAGAGGT
CTGAGTCCCGAATAGCAGCAGGGGACGGTCCCTGCGGAGAGGCATTCTGCCCTGAAGAC
AGCTCCATTGAGCCCCCTGCACTACAGGYGTAGTGCCTTGGACCAAGCCCCACAGCCTGGTA
AGGGCGCCTGCCAGGGCCACGGCCACGAGCCA

FIG. 15T

17192.1&2

TAATTTCTTAGTCGTTTGGAAATCCTTAAGCATGCAAAAGCTTTGAACAGAAGGGTTCACAA
AGGAACCAGGGTTGTCTTATGGCATCCAGTTAAGCCAGAGCTGGGAATGCCTCTGGGTTCAT
CCACATCAGGAGCAGAAGC.ACTTGACTTGTGGTCCCTGCTGCCACGGTTTGGGCGCCACC
ACGCCCACGTCCACCTCGTCCCTCCCTGCCGCCACGTCCCTGGGCGGCCAAGGTCTCCAAAA
TTGATCTCCAGCTGAGACGTTATATCA.TTTGCTGGCTTCCGGAAAATGATGGTCCATAACCG
AATCTTCAGCATGAGCCTCTTCACTCTTTGATTTATGAAGAACAATCCCTTCTTCCACTGC
CCATCAGC.ACCTTC.ATTTGGTTTTTCGGATATTA.AATTTCTACTTTTGGCCGGTCTTA.TTTTGA
ATAGCCTTCCACTCATCCAAAGTCATCTCTTTTGGACCCTCCTCTTTTACCTCTTCAACTTCA
TTCTCCTTA.TTTTTCAGTGTCTGCCACTGGATGATGTTCTTCACTTTCAGGTGTTTCTCAGTC
ACATTTGATTGATCCAAAGTCAGTTA.AATTCGTCTTTGACAGTTCCCCAGTTGTGAGATCCGCT
ACCTCCACGTTTGTCTCGTCTTCAGGCCAGATCTATCACTTCCACTATGCCTATCAAATT
CACGTTTGGCACGAGAATC.AAATCCATCTCCTCGGCCCA.TTCCACGTCCACGGCCCCCTCG
ACCTCTTCCAAGACCACCACGACCTCGAATAGGTGGTCAATAATCGGTCTATCAACTGAA
AATTCGCTCCTTCACTCTTTTCTTCAAGTGGCTTTTTCGAATCTTCTGTTACGAGGTGGTCTG
CCTTCTGGTCTTCTATCAA.TTATTTTCCCTTCACTCTGAAGTTGTTGATCAGGTCTTCTTCC
AACTCGTGC

17193

AACCGGATGGACCTGAGTCAGCCGAATCCTAGCCCCCTTCCCTTGGCCCTGCTGTGGTGCTC
GACATCAGTGACAGACCGAAGCAGCAGACCATCAAGCCTACGGGAGGCCCGGGCGCTT
GCGAAGATGAAGTTTGGCTGCCCTCTCCTTCCGGCAGCCTTATGCTGGCTTTGTCTTAAATG
GAATCAAGACTGTGGAGACCGGCTGCCGTCTCTGCTGAGCAGCCAGCGGA.ACTGTACCA
TCGCCGTCCACATTTGCTCAGACGGGACTGGGAAGGCCATGCCTGTGGGAGCTGCTGGTGG
AGACACTCGGCATCACTCCTGCTCAGATTCAGGCCCTTCTCAGGAAAGGGGAAAAGTTTG
GTCGAGGAGTCATAGCCGGGACTCGTTGACATTTGGGGAAACTTTGCAATGCCCGGAAGACT
TAACTCCCGATGAGGTTCTGGAACTAGAAAATCAAGCTGCACTGACCAACCTGAAGCAGA
AGTACCTGACTGTGATTTCAAACCCCAGGTGCTTACTGGAGCCCCATACCTTGGGAAAGGAG
GCAAGGATGTATTTCCAGGTAGACATECCAGAGCACCTCATCCCTTTGGGGCATGAAGTGT
GACAAGTGTGGGCTCCTGAAAGCAATGTTCCRGAGAAACCAGCTAAATCATGGCACCTTC
AATTTGCCATCGTGACCCAGACCTGTATAAAATTAGGTTAAAGATGAATTTCCACTGCTTTG
GAGAGTCCCACCCACTAAGCACTGTGCAATGTA.AACAGGTTTCTTTGCTCAGATGAAGGAA
GTACGGGGTGGGGCTTTCCTTGTGTGATGCCCTCTTAGCCACACAGGCAATGTCTCAAGTA
CTTTGACCTTACGGGTAGAAGGCAAAAGCTGCCAGTAAATGTCTCAGCATTTGCTGCTAAATTT
GGTCTCTAGTTTCTGCAATGTAC.AAATAAATGTGTTGTAGATGA

FIG. 15U

16443.1.edit

TCGAGCGGCGCGCGCGGCGCAGGTGTGCGGAGTCCAGCACGGGAGGCGTGGTCTTGTAGTTGT
TCTCCGGCTGCCCCATTGCTCTCCCACTCCACGGCGATGTCGCTGGGATAGAAGCCTTTGAC
CAGGCAGGTCAGGCTGACCTGGTTCTTGGTCACTCTCTCCCGGGATGGGGGCGAGGTGTAC
ACCTGTGGTTCTCGGGGCTGCCCTTTGGCTTTGGAGATGGTTTTCTCGATGGGGGCTGGGA
GGGCTTTGTTGGAGACCTTGCCTTGTACTCCTTGCCATTCAACCAGTCCTGGTGCANGAC
GGTGAGGACGCTNACCACACGGTACGNGCTGGTGTACTGCTCCTCCCGCGGCTTTGTCTTG
GCATTATGCACCTCCACGGCGTCCACGTACCAATTGAACCTTGACCTCAGGGTCTTCGTGGC
TCACGTCCACCACCACGCATGTAACCTCAAANCTCGGNCGCGANACGC

16443.2.edit

AGCGTGGTTCGCGGCGCGAGGTCTGAGGTTACATGCGTGGTGGTGGACGTGAGCCACGAAGA
CCCTGAGGTCAAGTTCAACTGGTACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAA
GCGCGGGGAGGAGCAGTACAACAGCACGTACCGTGTGGTCAGCGTCTCACCGTCTGCA
CCAGGACTGGCTGAATGGCAAGGAGTACAAGTGCAAGGTCTCCAACAAAGCCCTCCAGC
CCCCATCGAGAAAACCATCTCCAAGGCCAAAGGGCAGCCCCGAGAACCACAGGTGTACAC
CCTGCCCCCATCCCGGGAGGAGATGACCAAGAACCAGGTACGCTGACCTGCCTGGTCAA
AGGCTTCTATCCCAGCGACATCGCCCGTGGAGTGGGAGAGCAATGGGCGAGCCGAGAACAA
ACTACAAGACCACGCCTCCCGTGGTGGACTCCGACACCTGCCCGGGCGGCGCTCGA

16444.2.edit

AGCGTGGTTNCGCGCGAGCTCCCAACCAAGGCTGGANCCTGGATGCCATCAAAGTCTTCTG
CAACATGGAGACTGGTGAGACCTGCCGTGTACCCCACTCAGCCCAGTGTGGCCCCAGAAGAA
CTGGTACATCAGCAAGAAGCCCCAAGGACAAGAGCCATGTCTGGTTCGGCGAGAGCATGAC
CGATGGATTCCAGTTCGAGTATGGCCCGCAGGCTCCGACCCTGCCGATGTGGACCTGCCC
GGCGGNCGCTCGA

16445.1.edit

AGCGTGGTTCGCGCGCGAGGTCAAGAACCCCCCGGCACCTGCCGTGACCTCAAGATGTGC
CACTCTGACTGGAAGAGTGGAGACTGGATTGACCCCAACCAAGGCTGCACCTGGAT
GCCATCAAAGTCTTCTCCAACATGGAGACTGGTGAGACCTGCCGTGTACCCCACTCAGCCCA
GTGTGGGCCAGAAAGAACTGGTACATCAGCAAGAACCCCAAGGACAAGAGCCATGTCTGGT
TCGGCGAGAGCATGACCGATGGATTCCAGTTCCAGTATGGCGGCCACGGCTCCGACCCTG
CCGATGTGGACCTGCCCCGGCGCGCGCTCGA

FIG. 15V

16445.2.edit

TCGAGCGGTGCGCCGGGCAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCG
AACTGGAATCGATCGGNCA TGCTCTCGCCGAACCAGACATGCCTCTTGNCCTTGGGGTTCT
TGCTGATGTACCAAGNTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACC
ANTCTCCATGTTGCANAAGACTTTGATGGCATCCAGGTTGCAGCCTTGTTGGGGTCAATC
CAGTACTCTCCACTCTTCCAGACAGAGTGGCACATCTTGAGGTACGGCAGGTGCGGGCGG
GGTCTTGACCTCGGTGCGGACCACGCT

16446.1.edit

TCGAGCGGCCCGCCCGGGCAGGTCTCTCAGAGCGGTAGCTGTTCTTATTGCCCCGGCAGC
CTCCATAGATNAAGTTATTGCANGAGTTCTCTCCACGTCAAAGTACCAGCGTGGGAAGG
ATGCACGGCAAGGCCCAGTGACTGCGTTGGCGGTGCAGTATTCTTCATAGTTGAACATATC
GCTGGAGTGGACTTCAGAATCCTGCTTCTGGGAGCACTTGGGACAGAGGAATCCGCTGC
ATTCTGCTGGTGGACCTCGGCCGCGACCACGCT

16446.2.edit

AGCGTGGTGGCGGCCGAGCTCCACCAGGGAATGCAGCGGATTCCTCTGTCCCAAGTGC
TCCCAGAACGCCAGGATTCTGAAGACCACTCCAGCGATATGTTCAACTATGAAGAATACTG
CACCGCCAACGCAGTCACTGGGCCCTTGGCGTGCATCCTTCCCACGCTGGTACTTTGACGTG
GAGAGGAACCTCTGCAATAAATTCACTATGAGGCTGCCGGGGCAATAAGAACAGCTAC
CGCTCTGAGGAGGACCTGCCCGGGCGCGGCTCGA

16447.1.edit

TCGAGCGGCCCGCCCGGGCAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCG
AACTGGAATCCATCGGTGATGCTCTCGCCGAACCAGACATGCCTCTTGTCCTTGGGGTTCT
TGCTGATGTACCAAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACC
AGTCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTGTTGGGGTCAATC
CAGTACTCTCCACTCTTCCAGCCAGAAATGCCACATCTTGAGGTACGGCANGTGGGGCGG
GGTCTTGACCTCGGCCGCGACCACGCT

FIG. 15W

16447.2.edit

AGCGTGGTCCGCGCCGAGGTCAAGAAACCCCGCCCGCACCTGCCGTGACCTCAAGATGTG
CCACTCTGGCTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGA
TGCCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCCGTGTACCCCACTCAGCCC
AGTGTGGCCCAAGAAGAACTGGTACATCAGCAAGAACCCCAAGGACAAAGAGGCATGTCTGG
CTCGGCGAGAGCATGACCGATGGATTCCAGTTCGAGTATGGCGGCCAGGGCTCCGACCCT
GCCGATGTGGACCTGCCCGGGCGGCCGCTCGA

16449.1.edit

AGCGTGGTCCGCGCCGAGGTCTCTGTCAGAGTGGCACTGGTAGAAGNTCCAGGAACCCCTGA
ACTGTAAGGGTTCTTCATCAGTGCCAAACAGGATGACATGAAATGATGTACTCAGAAGTGTG
CTGNAATGGGGCCCATGANATGGTTGNCCTGAGAGAGAGCTTCTTGCTCTACATTCCGGCGG
GTATGGTCTTTGGCCTATGCCTTATGGGGGTGGCCGTTGNGGGCGGTGNGGTCCGCCTAAAA
CCATGTTCTCTCAAAGATCATTTGTTGCCCAACACTGGGTTGCTGACCANAAGTGCCAGGAA
GCTGAATACCATTTCCAGTGTCTATCCAGGGTGGGTGACGAAAGGGGTCTTTTGAAGTGT
GGAAGGAACATCCAAGATCTCTGNTCCATGAAGATTGGGGTGTGGAAGGGTTACCAAGTTG
GGGAAGCTCGCTGTCTTTTCTCTTCCAATCANGGGCTCGCTCTTCTGAATATTCTTCAGGGC
AATGACATAAAATTGTATATTCCGTTCCCGGTTCCAGGCCAG

16450.1.edit

TCGAGCGGCGCCCGCCCGGCGAGGTCCACCACACCCAAATTCCTTGCTGGTATCATGGCAGCCGC
CACGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCAGAGA
AGTGGTCCCTCGCCCGCCCGGCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGGA
ACCGAATATACAAATTTATGTCAATGCCCTGAAGAATAATCAGAAGAGCGAGCCCTGATTG
GAAGGAAAAAGACAGACGAGGCTTCCCAACTGGTAACCCCTTCCACACCCCAATCTTCATG
GACCAGAGATCTTGGATGTCTCTTCCAGAGTTCAAAAGACCCCTTTCTGTCACCCACCCCTGG
GTATGACACTGGAAATGGTATTCAGCTTCTTGGCACTTCTGGTCAACCAACCCAGTGTGTTGGG
CAACAAATGATCTTTGANGAACATGCTTTAGCGCGGACCACACCCGGCCACAACGGGCCACC
CCCATAAAGGCATAGGCCAAGAACAATCCCGNCGAATGTAGGACAAGAAGCTCTNTCTCAN
ACAANCATCTCATGGGCCCCCATTCANGACACTTCTGAGTACATCANTTCATGGCATCCTG
GTGCCACTGATAAAAACCCCTTACAGTTA

16450.2.edit

AGCGTGGTCCGCGCCGAGGTCTCTGTCAGAGTGGCACTGGTAGAAGTTCCAGGAACCCCTGA
ACTGTAAGGGTTCTTCATCAGTGCCAAACAGGATGACATGAAATGATGTACTCAGAAGTGTG
CTGGAATGGGGCCCATGAGATGCTTCTCTGAGAGAGAGCTTCTTGCTCTACATTCCGGCGGG
TATGGTCTTTGGCCTATGCCTTATGGGGGTGGCCGTTGTGGGCGGTGTGGTCCGCCTAAAAAC
CATGTTCTCTCAAAGATCATTTGTTGCCCAACACTGGGTTGCTGACCAGAAGTGCCAGGAAG
CTGAATACCATTTCCAGTGTCTATCCCAAGGGTGGGTGACGAAAGCGGTCTTTTGAAGTGTG
GAAGGAACATCCAAGATCTCTGGTCCATGAAGATTGGGGTGTGGAAGGGTTACCAAGTTGG
GGAAGCTCGTCTGTCTTTTCTCTTCCAATCANGGGCTCGCTCTTCTGATTATTCTTCAGGGC
AATGACATAAAATTGTATATTCCGNTCCCGGCTNCAGCCAATAATAAACCCTCTGTGACA
CCANGGCGGCGCCCAAGGANCAT

FIG. 15X

16451.1.edit

AGCGTGGTCCGGCCGAGGTCTCACCAGAGGTACCACCTACAACATCATAGTGGAGGCA
CTGAAAGACCAGCAGAGGCATAAGGTTCCGGGAAGAGGTTGTTACCGTGGGCAACTCTGTC
AACGAAGGCTTGAACCAACCTACGGATGACTCGTGCTTTGACCCCTACACAGTTTCCCAT
ATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAAACTGTTGTGCCAGTG
CTTANGCTTTGGAAGTGGTCATTTAGATGTGATTATCTAGATGGTGCCATGACAATGGT
GTGAACTACAAGATTGGAGAGAAGTGGGACCGTCAGGGAGAAAATGGACCTGCCCGGGC
GGCCGCTCGA

16451.2.edit

TCGAGCGGCGCGCCGGGCGAGGTCCATTTTCTCCCTGACGGTCCCACCTTCTCTCCAATCTTGT
AGTTCACACCAATTGTCATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAA
GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTACAGACATTCGTTCCCACTCATCTCCA
ACGGCATAATGGGAAACTGTGTAGGGGTCAAAGCACGAGTCATCCGTAGGTTGGTTCAAG
CCTTCGNTGACAGAGTTGCCCACGGTAACAACCTCTTCCCGAACCTTATGCCTCTGCTGGT
CTTTCAGTGCCTCCACTATGATGTTGTAGGTGGTACCTCTGGTGAGGACCTCGGCCGCGAC
CACGCT

16452.1.edit

AGCGTGGCCGCGGCGCGAGGTCCATTCCTGGAAACGGCATCAACTTGGAAAGCCAGTGATCG
TCTCAGCCTTGGTTCTCCAGCTAATGGTGATGGNGGTCTCAGTAGCATCTGTACACGAGC
CCTTCTTGGTGGGCTGACATTCCTCAGAGTGGTGACAACACCCCTGAGCTGGTCTGCTTGT
AAAGTGTCTTAAGA CATAGACACTCACTTCATATTTGGCGNCCACCATAAGTCTGTATA
CAACCACGGAAATGACCTGTGAGGAAC

16452.2.edit

TCGACCGGCGCGCGCGGCGAGGTCTCAGACCGGGTTCTGAGTACACAGTCAGTGTGGTTGC
CTTGCACGATGATATGGAGAGCCAGCCCTGATTGGAACCCAGTCCACAGCTATTCCTGCA
CCAACCTGACCTGAAGTTCACTCAGGTACACCCACAAGCCTGAGCGCCCAGTGGACACCA
CCCAATGTTACGCTCACTGGATAATCGAGTGGGGGTGACCCCCAAGGAGAAGACCGGACCA
ATGAAAGAAATCAACCTTGCTCCTGACAGCTCATCCGTGGTTGTATCAGGACTTATGGCGG
CCACCAAAATATGAAGTGAGTGTCTATGCTCTTAAGGACACTTTGACAAGCAGACCAGCTCA
GGGTGTTGTCACCACTCTGGAGAAATGTCAAGCCCAACCAAGAGGGCTCGTGTGACAGATGC
TACTGAGACCACCATCACCAATAGCTGGAGAACCAAGACTGAGACCATCACTGGCTTCCA
AGTTGATGCCGTTCAGCCAATCGACCTCGGCGCGGACCAACGCTT

16453.1.edit

AGCGTGGTCCGGCCGAGGTCTGCCCGAACTGCCAGTGTACAGGGAAGATGTACATGTTA
TAGNTCTTCTCGAAGTCCCGGGCCAGCAGCTCCACGGGGTGGTCTCCTGCCTCCAGGCGCT
TCTCATTCTCATGGATCTTCTTACCCGACGTTCTGCTTCTCAGTCAGAAGGTTGTTGTCC
TCATCCCTCTCATACAGGGTGACCAGGACGTTCTTGAGCCAGTCCCGCATGCGCAGGGGGA
ATTCCGTCAGCTCAGAGTCCAGGCAAGGGGGGATGTATTGCAAGGCCCCGATGTAGTCCA
AGTGGAGCTTGTGGCCCTTCTTGGTGCCCTCCAAGGTGCACTTTGTGGCAAAGAAGTGGCA
GGAAGAGTCTGAAGGTCTTGTGTCATTGCTGCACACCTTCTCAAACCTCGCCAATGGGGGCT
GGGCAGACCTGCCCGGGCGGCCGCTCGA

16453.2.edit

TCGAGCGGCCCGCCCGGGCAGGTCTGCCAGCCCCCATTGGCGAGTTTGAGAAGGNGTGCA
GCAATGACAAC.AAGACCTTCGACTCTTCTGCACTTCTTTGCCACAAAGTGCACCCTGGA
GGGCACCAAGAAGGGGCCACAAGCTCCACCTGGACTACATCGGGCCTTGCAAATACATCCC
CCCTTGCTGGACTCTGAGCTGACCGAATCCCCCTGCGCATGCGGGACTGGCTCAAGAAC
GTCTGGTCAACCTGTATGAGAGGGATGAGGACAACAACCTTCTGACTGAGAAGCANAAG
CTGCGGGTGAAGAANATCCATGAGAATGANAAGCGCCTGNAGGCANGAGACCACCCCGT
GGAGCTGCTGGCCCGGGACTTCGAGAACAATAACATGTACATCTTCCCTGTACACTGG
CAGTTCGGCCAGACCTCGGCCCGGACCACCT

16454.1.edit

AGCGTGGNTGCGGACGACGCCCACAAAGCCATTGTATGTAGTTTTANTTCAGCTGCAAAN
AATACCNCCAGCATCCACCTTACTAACCAGCATATGCAGACA

16454.2.edit

TCGACCGGTCCCGCCGGGCAGGTCTGCCCGCATAGCACCGGGCATATTTTGGAAATGGATGA
GGTCTGCCACCCTGAGCAGCCGAGCCAGGACTTGGTCTTAGTTGAGCAATTTGGCTAGGA
GGATAGTATGCAGCACGGTTCTGAGTCTGTGGGATAGCTGCCATGAAGNAACCTGAAGGA
GGCGCTGGCTGGTANGCGTTGATTACAGGCTCGGAACAGCTCGTACACTTGCCATTCTCT
GCATATACTGGNTAGTGAGGCCAGCCTGGCGCTCTTCTTGGCTGAGCTAAAGCTACATA
CAATGGCTTTGNGGACCTCGGCCCGGACCAGCTT

FIG. 15Z

16455.1.edit

TCGAGCGGCCGCGCCGGGCAGGTCCATTTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGT
AGTTCACACEATTGTTCATGACACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAA
GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTGAGACATTGTTCCCACTCATCTCCA
ACGGCATAATGGGAACTGTGTAGGGGTCAAAGCACGAGTCATCCGTAGGTTGGTTCAAG
CCTTCGTTGACAGAAGTTGCCCACGGTAACAACCTCTTCCCGAACCTTATGCCTCTGTGGT
CTTICAAGTGCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTCGGCCGCGA
CCACGCT

16455.2.edit

AGCGTGGTTTGCGGCCGAGGTCTCACCANAGGTGCCACCTACAACATCATAGTGGAGGC
ACTGAAAGACCAGCAGAGGCATAAGGTTGCGGAAGAGGTTGTTACCGTGGGCAACTCTGT
CAACGAAGGCTTGAACCAACCTACGGATGACTCGTGCTTTGACCCCTACACAGNTTCCCAT
TATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAAACTGTTGTGCCAGT
GCTTANGCTTTGGAAGTGGTCATTTGAGATGTGATTCTANATGGTGTGATGACAATGG
TGNGAACTACAAGATTGGAGAGAAAGTCGNACCGTCAGGGGANAAAATGGACCTGCCCCG
GCGGCNCGCTCGA

16456.1.edit

AGCGTGGTCCGCGCCGAGGTCTGGCTTCTGCTCANGTGATTATCCTGAACCATCCAGGCC
AAATAAGCGCCCGCTATGCCCTGNAATGGATTGCCACACGGCTCACATTGCATGCAAGTT
TGCTGAGCTGAAGGAAAACATTGATC

16456.2.edit

TCGAGCGGCCGCGCCGGGCAGGTCCAATTGAAACAAACAGTTCTGAGACCGTTCTTCCACCA
CTGATTAAGAGTGGCGNGCGGGGTATTAGGGATAATATTCAATTAGCCTTCTGAGCTTTCT
GGGCAGACTTGGTGACCTTGGCAGCTCCAGCAGCCTTCTGGTCCACTGCTTTGATGACACC
CACCGCAACTGTCTGTCTCATATCACCACAACAGCAAGCGACCCAAAGGTGGATAGTCTGA
GAAGCTCTCAACACACATGGGCTTCCAGGAACCATATCAACAATGGGCAGCATCACAG
ACTTCAAGAATTTAAGGGCCATCTTCCAGCTTTTACCAGAACGGCGATCAATCTTTTCTT
CAGCTCAGCAAACTTGCATGCAATGTGAGCCG

FIG. 15AA

16459.1.edit

TCGAGCGGCGCGCCCGGGCAGGTCCAGAGGGCTGTGCTGAAGTTTGCTGCTGCCACTGGAG
CCTCTCAATTGCTGGCCGCTTCACTCCTGGAACCTTCACTAACCAGATCCAGGCAGCCTT
CCGGGAGCCACGGCTTCTTGTTGNTACTGACCCAGGGCTGACCACCAGCCTCTCACGGAG
GCATCTTATGTTAACCTACCTACCATTTGCGCTGTGTAACACAGATTCTCCTCTGCGCTATGT
GGACATTGCCATCCCATGCAACAACAAGGGAGCTCACTCAGNNGGGTTTGATGTGGTGGA
TGCTGGCTCGGGAAGTTCTGCGCATGCGTGGCACCATTTCCTGTAACACCCATGGGANGN
CATGCTGATCTGGACTTCTACAGAGATCCTGAAGAGATTGAAAAAGAAGAACAGGCTGN
TTGCTGANAAAGCAAGTGACCAACGANGAAATTCANGGGTGAAANGGACTGCTCCCGCT
CCTGAATTCAGTGTACTCAACCTGANGNTGCAGACTGGTCTTGAAGGNGNACANGGGCC
CTCTGGGCCTATTTAAGCANCTTCGGTCGCGAACACGNT

16459.2.edit

AGCGTGNGTCGCGGCCGAGGTGCTGAATAGGCACAGAGGGCACCTGTACACCTTCAGACC
AGTCTGCAACCTCAGGCTGAGTAGCAGTGAACCTCAGGAGCGGGAGCAGTCCATTACCCCT
GAAATTCCTCCTTGGNCACTGCCTTCTCAGCAGCAGCCTGCTCTTCTTTTCAATCTCTTCA
GGATCTCTGTAGAAGTACAGATCAGGCATGACCTCCCATGGGTGTTACGGGAAATGGTG
CCACGGATGCGCAGAAGTTCCCGAGCCAGCATCCACCACATCAAACCCACTGAGTGAGCT
CCCTTGTTGTTGATGGGATGGGCAATGTCCACATAGCGCAGAGGAGAATCTGTGTTACAC
AGCGCAATGGTAGGTAGGTTAACATAAGATGCTTCCGCGAGAAGCTGGTGGTCAGCCCTG
GGGTCAAGTAACCACAAAGAAAGCCGTGCTTCCCGAAGGCTGCTGGATCTGTTAGTGAA
GGNTCCAGGAGTGAAGCGGCCAACAAATTCGAGTGGCTTCAGTGGCAAGCAGCAAACCTCA
GCACAAGCCCTCTGGACCTGCCCCCGCGCCGCTCGA

16460.1.edit

TCGAGCGGCGCGCCCGGGCAGGTCCAATTTCTCCCTGACGCGNCCACTTCTCTCCAATCTTGT
AGTTACACCAATTGTATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAA
GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTCAGACATTCGTTCCCACTCATCTCCA
ACGGCATAATGGGAAACTGTGTAGCGGTCAAAGCAGGAGTCAATCCGTAGGTTGGTTCAAG
CCTTCGTTGACAGAGTTGCCCCACGGTAACAACCTCTTCCCCGAACCTTATGCCTCTGCTGG
GCTTTCAGNCCCTCCACTATGATGNTGTACGGGGCCACCTCTGGNGANGACCTCGGCCCCG
GACCACGCT

16460.2.edit

AGCGTGCTCGCGGCCGAGGTCTCACCAGAGGTGCCACCTACAACATCATAGTGGAGGCA
CTGAAAGACCAGCAGAGGCATAAGCCTCGGGAAGAGGTTGTTACCGTGGGCAACTCTGTC
AACCAAGGCTTGAACCAACCTACGGATGACTCGTGCTTTGACCCCTACACAGTTTCCCAAT
ATGCCGTTGGAGATGACTGGGAACGAATGTCTGAATCAGGCTTTAAACTGTTGTGCCAGTG
CTTANGCTTTGGAAGTGGGTCAATTCAGATGTGATTATCTAGATGGTGCCATGACAATGG
NGNGAACTACAAGATTGGAGAGAAAGTGGNACCGNCAGCGACAAAATGGACCTGCCCCGG
CGCCCCCTCGA

FIG. 15BB

16461.1.edit

ACCGTGGTCCGGCCGAGGTCCACATCGGCAGGGTCCGAGCCCTGGCCGCCATACTCGAA
CTGGAATCCATCGGTCACTGCTCTCGCCGAACAGACATGCCTCTTGCTTGGGGTTCTTGC
TGATGTACCAAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACCAGT
CTCCATGTTGCAGAAGACTTTGATGGCATCCAGGNTGCAACCTTGGTTGGGGTCAATCCAG
TACTCTCCACTCTTCCAGCCAGAGTGGCACATCTTGAGGTACGGCAGGTGCGGNCGGGGG
NTTTGCGGCTGCCCTCTGGNCTTCGGNTGTNCTCNATCTGCTGGCTCA

16461.2.edit

TCGAGCGGCCGCCCGGGCAGGTCTCGCGGTCCGACTGGTGATGCTGGTCCTGTTGGTCCCC
CCGGCCCTCCTGGACCTCCTGGCCCCCTGGTCCTCCCAGCGCTGGTTTCGACTTCAGCTTC
CTGCCCCAGCCACCTCAAGAGAAGGCTCACGATGGTGGCCGCTACTACCGGGCTGATGAT
GCCAATGTGGTTTCGTGACCGTGACCTCGAGGTGGACACCACCTCAAGAGCCTGAGCCAG
CAGATCGAGAACATCCGGAGCCCAGAGGGCAGNCGCAAGAACCCCGCCGACCTGCCGT
GACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAA
GCTGCAACCTGGATGCCATCAAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCGTGTA
CCCCACTCAGCCCCAGTGTGGCCCCAAAAGAACTGGTACATCAGCAAGAACCCCAAGGACAA
GAAGCATGTCTGGTTCCGGCGAGAACATGACCGATGGATTCCAGTTCGAGTATGGCGGGCA
GGGCTCCGACCTGCCGATGGGGACCTTGGCCCGCAACACGCT

16463.1.edit

ACCGTGGNNCGCGCCGAGGTATAAAATCCAGNCCATATCCTCCCTCCACACGCTGANAG
ATGAAGCTGTNCAAAGATCTCAGGGTGGANAAAACCAT

16463.2.edit

TCGAGCGGCCGCCCGGGCAGGTCTTCAGACTTGGACTGTGTCACTGCCAGGCTTCCAG
GGCTCCAACCTGCAGACGGCCCTGTTGTGGCACAGTCTCTGTAAATCGCGAAAGCAACCATG
GAAGACCTGGGGGAAAACACCAATGGTTTATCCACCTGAGATCTTTGAACAACCTTCATCT
CTCAGCGTGCGGAGGGAGGCTCTGGAATGATATTTCTACCTCGCCCGGACACGCT

FIG. 15CC

16464.1.edit

CGAGCGGGCGACCGGGCAGGTNCAGACTCCAATCCANANAACCATCAAGCCAGATGTCAG
AAGCTACACCATCACAGGTTTACAACCGGGCAGTACTACAAGANCTACCTGCACACCTTG
AATGACAATGCTCGGAGCTCCCCCTGTGGTCAATCGACGCCTCCACTGCCATTGATGCACCAT
CCAACCTGCGTTTCCTGGCCACCACACCCAAATTCCTTGCTGGTATCATGGCAGCCGCCACG
TGCCAGGATTACCGGTACATCATCNAGTATGANAAGCCTGGGCCTCCTCCCAGAGAAGNG
GTCCCTCGGCCCCCGCCTGNTGTCCANAGGNTACTATTACTGNGCCNGCAACCGGCAACC
GATATCNATTTTGNCAATGGCCTTCAACAATAATTA

16464.2.edit

AGCGTGGTTTCGCGGGCCGANGTCCTGTGACAGTGGCACTGGTAGAAGTTCCAGGAACCCCTG
AACTGTAAGGGTTCTTCATCAGNGCCAACAGGATGACATGAAATGATGTACTCAGAAGTG
TCCTGGAATGGGGCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGNCTGTCTTTTTCC
TTCCAATCAGGGGCTCGCTCTTCTGATTATTGTCAGGGCAATGACATAAAATTGTATATTCG
GGTCCCGGNTCCAGGCCAGTAATAGTANCCCTCTGTGACACCAGGGCGGNGCCGAGGGACC
ACTTCTCTGGGAGGAGACCCAGGCTTCTCATACTTGATGATGTAACCGGTAATCCTGGCAC
GTGGCGGCTGCCATGATACCAGCAAGGAATTGGGGTGTGGTGGCCAGGAAACGCAGGTTG
GATGNGCATCAATGGCAGTGGAGGCGCTCGATGACCACAGGGGGAGCTCCGACATTGTC
ATTC.AAGGTG

16465.1.edit

AGCGTGGNCGCGGGCCGAGGTGCAGCGCGGCTGTGCCACCTTCTGCTCTCTGCCCCAAGCAT
AAGGAGGGTNCCTGCCCCCAGCAGAACATTAACNTCCCCAGCTCGGGCTCTGCCCCG

16465.2.edit

TCGAGCGGGCGGGCGGGCAGGTTCCTTCTGTAAGTGGNTACTTTATTGGNTGGGAAAG
GGAGAAGCTCTGGTACGGCAAGAGGGAATACAGAGNCCCGAAAAAGGGGAGGGCAGGT
GGGCTGGAACCAAGCGCAGGGCCAGGCAGAAACTTCTCTCTCACTGCTCAGCCTGGTG
GTGGCTGGAGCTCANAAATGGCAGTGACACAGGACACCTTCCCACAGCCAATTGGCGCGG
CATTTATCTGGCCAGGACACTGGCTGTCCACCTGGCACTGGTCCCGACAGAAGCCCCGAGC
TGGGGAAGTTAATGTTACCTGGGGCCAGGAACCTCCTTATCATTTGNGCAGAGAGCAG
AAGGTGGCACAGCCCCGGCTGCACCTCGGCTGGCACCAGCT

16466.2.edit

TCGAGCGGGCGGGCGGGCAGGTCCACCATAAGTCTGTGATACAACCACGGATGAGCTGTCA
GGAGCAAGGTTGATTTCTTTCAATGGTCCGGNCTTCTCTTGGGGGNCACCCGCACTCGAT
ATCCAGTGAGCTGAACAATGGGTGGCGTCCACTGGCGGCTCAGGCT

16467.2.edit

TCGAGCGGTTTCGCCCCGGGCAGGTCCACCACACCCAATTCCTTGCTGGTATCATGGCAGCCG
CCAGGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGCTCTCTCTCCAGAG
AAGCGGTCCCTCGGGCCCCGGCTGGTGTCAAGAGGCTACTATTACTGGCCTGGAACCGGG
AACCGAATATACAATTTATGTCAATGNCCTCAAGATAATCANNAANAGCGANCCCCCTGA
TTGGAAGGA

FIG. 15DD

01_16469.edit

AGCGTGGTCGCGGCCGAGGTTGTACAAGCT

02_16469.edit

TCGAGCGGNCGCCCGGGCAGGTCTGCCAACACCAAGATTGGCCCCCGCCGCATCCACACA
GTCCGTGTGCGGGGAGGTAAACAAGAAATACCGTGCCCTGAGGTTGGACGTGGGGAAATTC
TCCTGGGGCTCAGAGTGTGTACTCGTAAACAAAGGATCATCGATGTTGTCTACAATGCAT
CTAATAACGAGCTGGTTCGTACCAAGACCCTGGTGAAGAATTGCATGCTGCTCATGCACAG
CACACCGTACCGACAGTGGTACGAGTCCCACTATGCGCTGCCCCCTGGGCCGCAAGAAAGGG
AGCCAAGCTGACTCCTGAGGAAGAAGAGATTTTAAACAAAAACGATCTAANAAAAAAA
AAACAAT

03_16470.edit

AGCGTGGTTCGGCGCCGAGGTGAAAATGGTATTCAGCTTCCTGGCACTTCTGGTCAGCAACCC
AGTGTGGGCAACAATGATCTTTGAGCAACA TGGTTTTAGGCGGACCACACCGCCCA
ACGGCCACCCCATAAAGGCATAGGCCAAGACCATACCCGCCGAATGTAGGACAAGAAGCT
CTCTCTCAGACAACCATCTCATGGGGCCCATTCAGGACACTTCTGAGTACATCATTTATG
TCATCCTGTTGGCACTGATGAAGAACCCTTACAGTTAGGTTTCTGGAACCTTCTACCACT
GCCACTCTGACAGGACCTGCCCGGGCGCGCGCTCGA

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TCGAGCGGCGCGCGCGGGCAGGTCTCTGTCAGAGTGGCACTGGTAGAAGTTCCAGGAACCCCT
GAACTGTAAGGGTTCTTCATCAGTGCACAGGATGACATGAAATGATGTACTCAGAAGT
GTCTTGGAAATGGGCGCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGCTCTACATTCGGC
GGGTATGGTCTTGGCCTATGCCCTATGGGGGTGGCCGCTGTGGGCGGTGTGGTCCGCCTAA
AACCATGTTCTCTCAAAGATCAATTTGTTGCCCAACACTGGGTTGCTGACCAGAAGTGCCAGG
AAGCTGAATACCAATTCACCTCGGCCGCGACCACGCTA

05_16471.edi:

TCGAGCGGGCCGCCGGGGCAGGTCTCCCTTCTTGGGGCCCAGGGGCAGCGCATAGTGGGAC
TCGTACCACTGTGGGTACGGGTGTGCTGTGTGATGAGCAGCATGCCAATTCCTTCACCAGGGTCT
TGGTACGAACCAGCTCGTTATTAGATGCATTGTAGACAACATCGATGATCCTTGTTTTACG
AGTACAACACTCTGAGCCCCAGGAGAAATCCCCACGTCCAACTCAGGGCAGCGTATTTC
TTGTTACCTCCCCGCACACGGACTGTGTGATGCGGGCGGGGCCAAGCTGACTCCTGAGGA
AGAAGAGATTTTAAACAAAAAACGATCTAAAAAAATTCAGAAGAAATATGATGAAAGGA
AAAGCAATGCCAAAAATCAGCAGTCTCCTGGAGGAGCAGTTCCAGCAGGGCAAGCTTCTTG
CGTGATCGCTTCAAGCGCCGGACAGTGTGACCGAGCAGATGGCTATGTGCTAGAGGGCA
AAGAAGTGGAGTTCTATCTTAAGAAATATCAGCGCCGAGAAATGGTGTGTCTTCAACTAATC
CAAAGGGGAGTTTCAGACCAGTGCAATCAGCAAAACATGATACTGNTGGCCAAATTTA
TTGGTGACGGCTTGACANTANGANNGGCTGGGTCTTGGCGTTGGAATTGGNACAAGCT
TTGGCAGCCTTTTCTTTGGTTTTGCCAAAAACCTTTGNTGAAGANACCTNGGGCGGA
CCCCTTAACCGATTCCACNCCNGGNGCGGTCTANGNCCCNCTTG

FIG. 15EE

06_16471.edit

AGCGTGGTTCGCGGCCGAGGTCTGCTGCTTCAGCGAAGGGTTTCTGGCATAACCAATGATA
AGGCTGCCAAGAGACTGTTCCAATACCAGCACCAGAACCAAGCCACTCCTACTGTTGCAGCAC
CTGCACCAATAAATTTGGCAGCAGTATCAATGTCTCTGCTGATTGCACTGGTCTGAAACTC
CCTTTGGATTAGCTGAGACACACCATTCTGGGCCCTGATTTTCTAAGATAGAAGTCCAAAC
TCTTTGCCCTCTAGCACATAGCCATCTGCTCGGTACACTGTCCCGGCCCTGAAGCGATGC
ACGCAAGAAGCTTGCCCTGCTGGAAGTCTCTCCAGGAGACTGCTGATTTTGGCATTCTT
TTTCTTTTCATCATATTTCTTCTGAAATTTTTAGATCGTTTTTTGTTTAAAAATCTCTTCTTCC
TCAGGAGTCAGCTTGCGCCCCGCGCATCCACACAGTCCGTGTGCGGGGAGGTAACAAGA
AATACCGTGCCCTGAGGTTGGACGTGGGGAATTTCTCTGGGGCTCAGAGTGGTGTACTCG
TAAAAACAAGGATCATCGATGGTGNCTACAATGCATCTAATAACGAGCTGGGTGGACCCA
AAGAACCTGGNGAANAAATGGATCGNCTCATCGACAGGACACCGTACCCGACAGGGGNA
CGANTCCCACTATGCGCTTGCCCTGGGCCGCAANAAAGGAAAAGTGGCCGGCGGCCNT
CGAAAGCCCCAATTNTGGAAAAATCCATCACACTGGGNGGCCNGTCCGAGCATGCATNTAN
AGGGGCCCATTCCTCTNANN

07_16472.edit

TCGAGCGGCGCGCGGCCAGGTCCCCAACCAGGCTGCAACCTGGATGCCATCAAAGTCT
TCTGCAACATGGAGACTGGTGAGACCTGCGTGTACCCCACTCAGCCCAGTGTGGCCGAGA
AGAACTGGTACATCAGCAAGCAACCCCAAGGACAAGAGGCATGTCTGGTTGGCGAGAGCA
TGACCGATGGATTCCAGTTCGAGTATGCGCGGCCAGGGCTCCGACCTGCCGATGTGGACCT
CGGCCGCGACCAACGCT

08_16472.edit

AGCGTGGTTCGCGGCCGAGGTCCACATCGGCAGGCTCGGAGCCCTGGCCGCCATACTCGAA
CTGGAATCCAATCGGTCTGCTCGCCCAACCAGACATGCCTCTTGTCTTGGGGTCTTGG
TGATGTACCACTTCTTCTGGGCCACACTGCGCTGAGTGGGGTACACGCACGTCTCACCACT
CTCCATGTTGCAGAAGACTTGTATGGCATCCAGGTTGCAGCCTTGGTTGGGGACCTGCCCC
GGCGGCCGCTCGA

09_16473.edit

TCGAGCGGCGCGCGGCCAGGTCCACACACCCAATTCTTGGTATCATGGCAGCCGC
CACCTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCTCTCCAGAGA
AGTGGTCCCTCGGCCCGCCCTGGTCTCACAGAGGCTACTATTACTGGCCTGGAACCGGGA
ACCGAATATACAAATTTATGTCATTGCCCTGAAGCAATAATCAGAAGAGCGAGCCCTGATTG
GAAGGAAAAAGACAGACGAGCTTCCCCAAGTGGTAACCTTCCACACCCCAATCTTCATG
GACCAGAGATCTTGGATGTTCTTCCACAGTTCAAAAGACCCCTTTCGTACCCACCCCTGG
GTATGACACTCGAAAATGGTATTACGCTTCTCGGCACTTCTGGTACGCAACCCAGTGTGGG
CAACAAATGATCTTTGACGAACATGCTTTAGGCGGACCACACCGCCCAACCGGCCACC
CCCATAAAGGCATAGGCCAAGACCATACCCGCGGAATGTAGGACAAGAAGCTNTNTNTCAN
ACACCATNTNATGGGCCCAATCCAGGACACTTCTGAGTACATCATTTATGNCATCTGTGG
CACTTGATGAAAACCCCTTACAGTTCAGGGTCTGGAATTTTACCAGCCCTNTTACAGGAC
TNGCCCGGACNCTTAAGCCNATTNACCCCTGGGGCGTTCTANGGTCCCACTCGNNCACTG
GNGAAAAATGGCTACTGTN

FIG. 15FF

11_16474.edit

ACGCTGGTTCGGCGCCGAGGTCCACTAGAGGTCTGTGTGCCATTGCCCAGGCAGAGTCTCTG
CGTTACAAACTCCTAGGAGGGCTTGCTGTGCGGAGGGGCTGCTATGGTGTGCTGCGGTTCA
TCATGGAGAGTGGGGCCAAAGGCTGCGAGGTTGTGGTGTCTGNGAAACTCCNAGGACANG
AGGGCTAAATCCATGAAGTTTGTGGATGGCCTGATGCCACAATCGGAGACCCCTGTTAA
CTACTACCGTCTNACCNCCTGCTGTNCNCCCCCNTTTCTGCTNAANACATNGGGNTNNTNC
TTGNCCNTCCTTGGGTNGAANA TNNAATNGCCTNCCNNTTCTNANCNCTACTNGNTCCANA
NTTGGCCTTTAAANAATCCNCCTTGCCCTNNNC.ACTGTTCAmntTTTTNTTTCGTAAGACCCCT
ATNANTTNNAATTANA TNNTNNNNNNCTC.ACCCCCTCNTCATTNANCCNATANGCTNNNA
ANTCCTTNANNCCTCCCNCCCNNTNCTCNTACTNANTNCTTCTNCCCCATTACNNAGCT
CTTTCNTTTAANAATAATGNNGCCNNGCTCTNCATNTCTACNATNTGNNNAA TNCCCCCNCC
CCCNANCGNNTTTTGACCTNNNAACCTCCTTTCCTCTTCCCTNCCNNAAAATTNCCNANTTCC
NCNTTCCNCCNTTTTCGGNTNNTCCCATNCTTTCCANNNCTTCANTCTANCNCNCTNCAACT
TATTTTCCNTCA TCCCTTNTTCTTTAC.ANNCCCCCTNNTCTACTCNCNNTTNCATTANAT
TTGAAACTNCCACNNTT.ANTTNCCTCNCCTCTACNNTTTTATTTTNCGNTCNCCTCTACNTAAT
ANTTTAATNANTTNTCN

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TCGAGCGGGCGCGCGGGCAAGGTGTCCCAAGGAGACCGCTGTTATGCTGTGGGGACTGGCTG
GGGCATGGCAGGCGGCTCTGGCTTCCCAACCGTTCTGTTCTGAGATGGGGGTGGTGGGCAGT
ATCTCATCTTTGGGTTCCACAATGCTCAAGTGGTCAGGCAGGGGCTTCTTAGGGCCAATCT
TACCAGTTGGGTCCAGGGCAGCATGATCTTCACTTGTATGCCCAGCACACCGCTGTCTGAG
CAACACGTGGCGGCACAAGCAGTGTCAACGTAGTAAGTTAACAGGGTCTCCGCTGTGGATC
ATCAGGCCATCCACA.AACTTCATGGA.TTAGCGCTCTGTCTCGGAGTTTCCAGACACCA
CAACCTCGCAGCGCTTTGGCGCCACTGTCCATGATGAACCGCAGCACACCATAGCAGGCCCT
CGGCACAAGCAAGCGCTCTTAAGA.TTTGTAACGCANANACTCTGCTGGCAATGGCACAC
AAACCTCTAGTGGACCTCGGNCGCGACCAACCG

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TCGAGCGGGGGCGCGGGCAGGTGTGCTCAGGATAGCCTGCGAGTCCCTCCTACTGCTACTC
CAGACTTGACATCATATGAATCATACTGGGGACAAATAGTTCTGAGGACCAUTAGGGCATG
ATTACACAGATTCCAGGGGGGGCAGGACAACCAGGGGCCCTGGTTGTCTCTGGAATACCCAG
GGTCACCAATTTCTCCCAAGCAATACCAGGAGGGCCTGGATCTCCCTTGGGGCCTCAGGGTCC
TTGACCAATTAGGAGGGCCAGTAGGAGCAGTTGGAGGCTGTGGGCAAAAGCTGCACAACATTC
TCCAAATGGAATTTCTGGGTTGGGGCAGTCTAAATTTTGATCCGTCACATAATTATGTCATCG
CAGAGAACGGATCCTGAGTCACAGACACATAATTTGGCATGGTTCTGGCTTCCAGACATCTC
TATCCGNCATAGGACTGACCAAGCATGGGAACATCCTCCTTCAACAAGCTTCTGTTGTGCC
AAAAATAATATGTGGGATGAAGCAGACCCGAGAAGTANCCAGCTCCCTTTTGCACAAAGC
NTCATCATGTCTAAATATCAGACATGAGACTTCTTTGGGCAAAAAAGGAGAAAAAGAAAA
AGCAGTTC.AAAGTANCCNCCATCAAGTCTGTTCCCTTGCCCNCTTACGACCCCGGGCCCGGTT
ATAAAACACCTNCGGCGGGACCCCGCT

FIG. 15GG

14_16475.edit

AGCGTGGTCCGCGCCGAGGTGTTTTATGACGGGCGCGGTGCTGAAGGGCAGGGAACAACACT
TGATGGTGCTACTTTGAACTGCTTTTCTTTTCTCTTTTGCACAAAGAGTCTCATGTCTGA
TATTTAGACATGATGAGCTTTGTGCAAAAAGGGGAGCTGGCTACTTCTCTCTCTGCTTCATC
CCACTATTATTTTGGCACAACAGGAAGCTGTTGAAGGAGGATGTTCCCATCTTGCTCAGTC
CTATGCGGATAGAGATGTCTGGAAGCCAGAACCATGCCAAATATGTGTCTGTGACTCAGG
ATCCGTTCTCTGCGATGACATAATATGTGACGATCAAGAATTAGACTGCCCAACCCAGAA
ATTCCATTGGAGAATGTTGTGCAAGTTTGGCCACAGCCTCCAACCTGCTCCTACTCGCCCTCC
TAATGGTCAAGGACCTCAAGGCCCCAAGGGAGATCCAGGCCCTCCTGGTATTCTGCGGAG
AAATGGTGACCTGGTATTCCAGGACAACCAGGGTCCCCTGGTTCTCTGCCCCCCTGGA
ATCNGGNGAATCATGCCCTACTGGTCTCAAACCTATTCTCCANATGATTATATGATGTC
AAGTCTGGGATAGCNAGTANGGANGGACTCGCAGGCTATTCTGGACCANACCTGCCGGGG
GGCGTTTCGAAAGCCCGAATCTGCANANNTNCTTACACTGGCGGCGCTCGAGCTGCTTT
AAAAGGGCCATTCCNCCTTTAGNGNGGGGGANTACAATTACTNGCGCGCTTTTANANCG
CGNGNCTGGGAAAT

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AGCGTGGTCCGCGCCGAGGTCCACATCGGCAGGGTCCGAGCCCTGGCCGCCATACTCGAA
CTGGAATCCATCGGTCACTGCTCTCGCCGAACCAGACATGCCCTCTGTCTTGGGGTTCTTGC
TGATGTACCAGTTCTTCTGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACCACT
CTCCATGTTGCAGAAGACTTTGATGCCATCCAGGTTCAGCCTTGGTTGGGGTCAATCCAG
TACTCTCCACTCTTCCAGTCAGACTGCCACATCTTGAGGTACGCCAGGTCCGCGCGGGGT
TCTTGGCGCTGCCCTCTGGGCTCCGGAATCTCTCGATCTGCTGGCTCAGGCTCTTGAGGGTG
GTGTCCACCTCGAGGTACCGGTACGAACCATTTGGCATCATCAGCCCGGTAGTAGCGGC
CACCATCGTGAGCCTTCTCTTGANGTGGCTGGGGCAGGAAGTGAAGTCGAAACCAGCCCT
GGGAGGACCAGGGGGACCAANAGGTCCAGGAAGGGCCCGGGGGGACCAACAGGACCAG
CATCACCAAGTGCGACCCGCGAGAACCTGCCCGCGCCGNCCTCGAA

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TCGAGCGNCGCCCGGGCAGGTCTCGCGCTCGCACTCGGTGATGCTGGTCTGTTGGTCCCC
CCGGCCCTCCTGGACCTCCTGGTCCCCCTGGTCTCCACCGCTGGTTTCGACTTCAGCTTC
CTGCCCCAGCCACCTCAAGAGAAGGCTCAGGATGGTGCCCGCTACTACCGCGCTGATGAT
GCCAATGTGTTCTGTGACCGTGACCTCGAGGTGGACACCACCTCAAGAGCCTGAGCCAG
CAGATCGAGAACAATCCGGAGCCAGAGGGCAGCCGCAGCAACCCCGCCCGCACCTGCCGT
GACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCA
GGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCGTGT
ACCCCACTCAGCCCACTGTGGCCCAAGAACTGTTACATCAGCAAGAACCCCAAGGACA
AGAGGCAATGTCTGTTCCGGGAGAGCAAGACCATGGATTCCAGTTCCAGTATGGCGGCC
AGGGCTCCCACCTGCCGATGTGACCTCCGGCCCGGACCACTT

FIG. 15HH

17_16477.edit

TNGAGCGGCCGCCCGGGC.AGGNTGNNAACGCTGGTCCTGCTGGTCCTCCTGGCAAGGCTG
GTGAAGATGGTCACCCTGGAAAACCCGGACGACCTGGTGAGAGAGGAGTTGTTGGACCAC
AGGGTGCTCGTGGTTTTCCCTGGAACTCCTGGACTTCCTGGCTTCAAAGGC.ATTAGGGGACA
CAATGGTCTGGATGGATTGAAGGGACAGCCCCGGTGCTCCTGGTGTGAAGGGTGAACCTGG
TGCCCCCTGGTGAAAATGGAACTCC.AGGTCAAACAGGAGCCCCGTGGGCTTCCTGGTGAGAG
AGGACCGTGTGGTGGCCCTGGCCCANACCTCGGCCGCGACCACGCTAAGCCCGAATTTCC
AGCACACTGGNGGCCGTT.ACTANTCGATCCGAGCTCGGTACCAAGCTTGGCGTAATCATG
GTCATAGCTGTTTTCTGNGTGAAATTGTTATCCGCTCACAATTTACACANCATACGAAGC
CGGAAAGCATAAAGTGTAAGCCTTGGGGTGCTAATGAGTGAGCTAACTCNCAITTAATTT
GCGTTGCGCTCACTGCCCCGTTTTCC.ANNNGGGAAACCNNTGGCNTNGCCNGCTTGCNTTAA
NTGAAATCCGCCNACCCCCGGGGAAAAGNCGGTTTGCNGTATTGGGGCNCTTTTTCCCTTT
CCTCGGNTTACTTGANTTANTGGGCTTTTGCNCGNTTCGGGTTGNGGCGANCNGGTTCAACN
TCACNCCAAAGGNGGNAANACGCTTTCCCANAAATCCGGGGGNTANCCCAANGNAAAAC
ATNNGNCNAANGGCT

18_16477.edit

AGCGTGGTTNGCGGCCGAGGTCTGGGCCAGGGCCACCAACACGTCCTCTCTCACCAGGAA
GCCCCAGGGCTCCTGTTTGACCTGGAGT.CCATTTTCACCAGGGGCACCAGGTTCAACCTT
CACACCAGGAGCACCGGGCTGTCCCTTCAATCCATNCAGACCAATTGTGNCCTTAATGCCCT
TTGAAGCCAGGAAGTCCAGGAGTTCCAGGGAACACCGAGCACCTGTGGTCCAACAAC
TCCTCTCTCACCAGGTGCTCGGGGT.TTCCAGGGTGACCATCTTCAACAGCCTTGCCAGGA
GGACCAGCAGGACCAGCGT.ACCAACCTGCCCGGGCGGCCGCTCGA

21_16479.edit

TCGAGCGGGCCCGCGGGCAGGTCCA.TTCTCCCTGACGGTCCCACCTTCTCTCCAATCTTGT
AGTTCACACCAATTGTCA.TGCCACCATCTAGATGAATCACATCTGAAATGACC.ACTTCCAAA
GCCTA.AGCACCTGGCACAACAGTTTAAAGCCTGATTCAGACATTCGTTCCCACTCATCTCCA
ACGGCATAAATGGGA.AACTGTGTAGGGGTCAAACCGAGTCATCCGTAGGTTGGTTCAAG
CCTTCGTTGACAGAGTTGCCACGGTAAACAACCTCTTCCCGAACCTTATGCCCTCTGCTGGTC
TTTCAGTGCCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTCGGCCGCGACC
ACGCT

22_16479.edit

ACCGTGGTCCCGGCCGAGGTCTCACCAGAGGTGCCACCTACAACATCATAGTGGAGGCA
CTGAAAGACCAGCAGAGGCATAAGGTTCCGGGAAGAGGTTGTTACCGTGGGCAACTCTGTC
AACGAAGGCTTGA.ACCAACCTACGGATGACTCGTGCTTTGACCCCTACACAGTTTCCCATT
ATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAAACTGTTGTGCCAGTG
CTTAGGCTTTGGAAAGTGGTCAATTC.AAGATGTGATTCATCTAGATGGTGCCATGACAATGG
TGTGA.ACTACAAGATTGGAGAGAAGTGGGACCGTCAGGGAG.AAAATGGACCTGCCCGGG
CCGGCCGCTCGA

FIG. 15II

24_16480.edit

TCGAGCGNNCGCCCGGGCAGGTCCAGTAGTGCCCTCGGGACTGGGTTCACCCCCAGGTCTG
CGGCAGTTGTACACAGCGCCAGCCCCGCTGGCCTCCAAAGCATGTGCAGGAGCAAATGGCA
CCGAGATATTCCTTCTGCCACTGTTCTCTACGTGGTATGTCTTCCCATCATCGTAACACGT
TGCTCATGAGGGTCACACTTGAATCTCTCTTTCCGTTCCCAAGACATGTGCAGCTCATTT
GGCTGGCTCTATAGTTTGGGGAAGTTTGTGAAACTGTGCCACTGACCTTTACTTCTCTCT
TCTCTACTGGAGCTTTCTGTACCTTCCACTTCTGTCTTGGTAAATGGTGGATCTTCTATCA
ATTCATTGACAGTACCCACTTCTCCCAAAACATCCAGGGAATAGTGATTTAGAGCGATT
AGGAGAACCAAATTATGGGGCAGAAATAAGGGGCTTTTCCACAGGTTTTCTTTGGAGGA
AGATTTCACTGGTGACTTTAAAGGAATACTCAACAGTGTCTTCATCCCCATAGCAAAAGAA
GAAACNGTAAATGATGGAANGCTTCTGGAGATGCCNNCATTTAAGGGACNCCCAGAACTT
CACCATCTACAGGACCTACTTCAGTTTACANNAAGNCACATANTCTGACTCANAAAGGAC
CCAAGTAGCNCCATGGNCAGCACTTTNAGCCTTTCCCTGGGGAAAANNTTACNTTCTTAA
ANCCTNCGCCNNGACCCCCCTTAAGNCCAAATNTGGGAAAANTTCCNTNCNCTGGGGGGC
NGTTCNACATGCNTTTNAAGGGCCCCAATTNCCCCNT

25_16481.edit

TCGAGCGGCGCCCGCCCGGGCAGGTGTCCGAGTCCAGCACGGGAGGCGTGGTCTTGTAGTTGT
TCTCCGGCTGCCCCATTGCTCTCCCACTCCACGGCGATGTGCTGGGATAGAAGCCTTTGAC
CAGGCAGGTACGGCTGACCTGGTCTTGGTCACTCTCTCCCGGGATGGGGGCAGGGTGTAC
ACCTGTGGTTCTCGGGGCTGCCCTTGGCTTTGGAGATGGTTTCTCGATGGGGGCTGGGA
GGGCTTTGTTGGAGACCTTGCCTTGTACTCTTCCATTACGCCAGTCTCTGGTGCAGGAC
GGTGAGGACGCTGACCACACGGTACGTGCTGTTGTACTGCTCTCTCCCGGGCTTTGTCTTG
GCATTATGCACCTCCACGGCGTCCACCTACCTAGTTGAACCTTGACCTCAGCGTCTTCTGTGG
TCACGTCCACCACCACCACTGTAACCTCAGACCTCGCCCGGACCAAGCT

26_16481.edit

AGCGTGGTCCGCGCCGAGGTCTGAGCTTACATCCGTGGTGGTGGACGTGAGCCACGAAGA
CCCTGAGGTCAAGTTCAACTGCTACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAA
GCGCGGGGAGGAGCAGTACAACAGCACCTACCGTGTGCTCAGCGTCTCACCCTCTGCA
CCAGGACTGGCTGAATGCCAAGCACTACAAGTCCAAGGTCTCCAACAAGCCCTCCCAAC
CCCCATCGAGAAAACCACTCTCAAAAGCCAAAGGGCAAGCCCCGAGAACCACAGGTGTACA
CCCTGCCCCCATCCCGGGAGGAGATGACCAAGAACCAGGTACCTTGACCTGCTCTGGTCA
AAGGCTTCTATCCCAGCGACATCCCGGTGGAGTGGGAGAGCAATGGGCAGCCGGAGAACA
ACTACAAGACCACGCCTCCCGTCTGCTGCACTCCGACACCTGCCCCGGCGGCGCTCGA

27_16482.edit

TCGAGCGGCGCCCGCCCGGGCAGGTGAAATGGCTCTCTGCTGACCACCCCGGTGCTGGTGGTGG
GTACAGAGCTCCGATGGGTGAAGCCATTGACATAGAGACTGTCCCTGTCCAGGGTGTAGG
GGCCAGCTCAGTGATGCCGTGGGTGAGCTGGCTCAGCTTCCAGTACACCCGCTCTCTGTC
CAGTCCAGGGCTTTTGGGGTCAAGCACTATGGGTCCAGACAGCATCCACTCTGGTGGCTGC
CCCATCTTCTCAGGCTGAGCAAGCTCAGTCTGCAACCAGAGTACAGAGAGCTGACACT
GGTGTCTTGAACAAGGCCATAAGCAGACCTTGAAGGACACCTCGCCCGGACCAAGCT

FIG. 15JJ

23_16482.edit

AGCGTGGTCGCGGCCGAGGTGTCCTTCAGGGTCTGCTTATGCCCTTGTTCAAGAACACCAG
TGTCAGCTCTCTGTACTCTGGTTGCAGACTGACCTTGCTCAGGCCTGAGAAGGATGGGGCA
GCCACCAGAGTGGATGCTGTCTGCACCCATCGTCTGACCCCAAAAGCCCTGGACTGGACA
GAGAGCGGCTGTACTGGAAGCTGAGCCAGCTGACCCACGGCATC.ACTGAGCTGGGCCCCCT
ACACCCTGGACAGGGACAGTCTCTATGTCAATGGTTTCACCCATCGGAGCTCTGTACCCAC
CAECAGCACCGGGGTGGTCAGCGAGGAGCCATTCAACCTGCCCCGGCGGCCGCTCGA

29_16483.edit

AGCGTGGTCGCGGCCGAGGTCTGTCAGAGTGGCACTGGTAGAAGTTCCAGGAACCCTGA
ACTGTAAGGGTTCTTCATCAGTGCCAAACAGGATGACATGAAATGATGTACTCAGAAGTGTC
CTGGAATGGGGCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGTCCTACATTCGGCGGG
TATGGTCTTGGCCTATGCCCTTATGGGGGTGECCTTGTTGGCGGTGTGGTCCGCCTAAAAC
CATGTTCTCAAAGATCATTTGTTGCCAAACACTGGGTTGCTGACCAGAAGTGCCAGGAAG
CTGAATACCATTTCCAGTGTCATACCCAGGGTGGGTGACGAAAGGGGTCTTTTGAAGTGTG
GAAGGAACATCCAAGATCTCTGGTCCATGAAGATTGGGGTGTGGAAGGGTTACCAAGTTGG
GGAAGCTCGTCTGTCTTTTTCCTTCCAATCAGGGGCTCGCTCTTCTGATTATTCTTCAGGGC
AATGACATAAAATTGTATATTCGGTCCCGGTTCCAGGCCAGTAATAGTAGCCTCTGTGACAC
CAGGGCGGGGCGAGGGACCCCTTCTNTTGAAGAGACCAGCTTCTCATACTTGATGATGA
GNCCGGTAATCCTGGCACGTGGNGGTTGCATGATNCCACCAAGGAAATNGGNGGGGGNG
GACCTGCCCCGGCGGGCTTCNAAACCCCAATTCACACACTTGGNGGCGGTACTATGGATC
CCTCNGTCCA.ACTTGGNGGAATATGGCATAACTTTT

31_16484.edit

TCGAGCGGGCGCGCGGCCGAGGTCTGTCAGCTTTCACCAAGTGGGAACGTGT.AATCCGTCT
CCACACACAAGGCCAGGACTCGTTTGTACCGGTTGATGATAGAATGGGGTACTGATGCCAA
CAGTTGGGTAGCCAATCTGCAGACACAGACTGCCAACATTGCGGACACCCCTCCAGGAAGC
GAGAATGCAGAGTTTCTCTGTGATATCAAGCACTTCAGGGTTGTAGATGCTGCCATTGTC
GAACACCTGCTGGATGACCAAGCCCAAGGAGAAGGGGGAGATGTTGAGCATGTTACGCAG
CGTGGCTTCCTGGCTCCCACTTTGTCTCCAGTCTTGATCAGACCTCGGCCGCG.ACCACGCT

37_16487.edit

AGCGTGGTCGCGGCCGAGGTCTGTCCTACAGTCTCAGGACTCTACTCCCTCAGCAGCGTG
GTGACCGTGGCCTCCAGCAACTTCGGCACCCAGACCTACACCTGCAACGTAGATCACAAGC
CCAGCAACACCAAGGTGGACAAAGAGACTTGAGCCCAAAATCTTGTGACAAA.ACTCACACAT
GCCCCCGTGGCCAGCACCTGA.ACTCTGGGGGGACCGTCAGTCTTCTCTTCCCCCGCAT
CCCCCTTCCA.AACCTGCCCGGGCGGCCGCTCG

FIG. 15KK

38_16487.edit

CGAGCGGCCGCCCCGGGCAGGTTTGGAAAGGGGGATGCGGGGGAAGAGGAAGACTGACGGT
CCCCCAGGAATTTCAGGTGCTGGGCACGGTGGGCATGTGTGAGTTTGTACAAGATTGG
GCTCAACTCTCTTGTCCACCTTGGTGTGCTGGGCTTGTGATCTACGTTGCAGGTGTAGGTC
TGGGTGCCGAAGTTGCTGGAGGGCACGGTCACACGCTGCTGAGGGAGTAGAGTCCTGAG
GACTGTAGGACAGACCTCGGCCGCGACCACGCT

39_16488.edit

NGGNNGGTCCGGNCNGNCAGGACCACTCNTCTTCGAAATA

41_16489.edit

AGCGTGGTCCGGCCGAGGTCTCTACTTGCTCTGCAAAGCACCGATAGCTGCGCTCTGG
AAGCGCAGATCTGTTTTAAAGTCCTGAGCAATTTCTCGCACAGACGCTGGAAGGGAAGTT
TGCGAATCAGAAGTTCAGTGGACTTCTGATAACGTCTAATTTACGGAGCGCCACAGTACC
AGGACCTGCCCGGGCGGCCCTCGA

42_16489.edit

TCGAGCGGCCGCCCCGGGCAGGTCTCTGCTACTGNGCGGCTCCGTGAAATTAGACGTTATCA
GAAGTCCACTGAACTTCTGATTCCGAAACTTCCCTTCCAGCGTCTGGTCCGAGAAATTGCT
CAGGACTTTAAACAGATCTGCCCTTCCAGAGCGCAGCTATCGGTGCTTTGCAGGAGGCA
AGTCAGGACCTCGGCCGCGACCACCT

45_16491.edit

TCGAGCGGCCGCCCCGGGCAGGTCCACATCGGCAGGGTCCGAGCCCTGCGCGCCATACTCG
AACTGGAATCCATCGGTCACTCTCTCGCCGAACAGACATGCCTCTTGTCTTGGGGTTCT
TGCTGATGTACCACTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACC
AGTCTCCATGTTGCAGAAGACTTTCATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATC
CAGTACTCTCCACTCTTCCAGTCAGAGTGGCACATCTTGAGGTACGGCAGGTGCGGGCGG
GGTCTTGACCTCGGCCGCGACCACCT

FIG. 15LL

46_16491.edit

GTGGGNTTGAACCCNTTTNANCTCCGCTTGGTACCGAGCTCGGATCCACTAGTAACGGCCG
CCAGTGTGCTGGAATTCGGCTTAGCGTGGTCCGGCCGAGGTCAAGAACCCCGCCCGCAC
CTGCCGTGACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCC
CAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGAC
CTGCCGTGTACCCCACTCAGCCCAAGTGTGGCCCAAGAAGTGGTACATCAGCAAGAACCC
CAAGGACAAGAGGCATGTCTGGTTCGGCGAGAGCATGACCGATGGATTCCAGTTCGAGTA
TGGCGGCCAGGGCTCCGACCCCTGCCGATGTGGACCTGCCCGGGCGGCCGCTCGA

47_16492.edit

AGCGTGGTCCGGCCGAGGTCTGGGATGCTCCTGCTGTACAGTGAGATATTACAGGATC
ACTTACGGAGAAACAGGAGGAATAGCCCTGTCCAGGAGTTCAGTGTGCTGGGAGCAAG
TCTACAGCTACCATCAGCGGCCCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
TCACTGGCCGTGGAGACAGCCCCGC.AAGCAGCAAGCCAATTTCCATTAAATTACCGAACAG
AAATTGACAAACCATCCCAGATGCAAGTGACCGATGTTT.CAGGACAACAGCATTAGTGTC
AGTGGCTGCCTTCAAGTTCCTCTGTTACTGGTTACAGAGTAACCACTCCCAAAAATGG
ACCAGGACCAACAAAACTAAAACTGCAGGTCCAGATCAAAACAGAAAATGACTATTGAAG
GCTTGCAGCCACAGTGGAGTATGTGGTTAAGTGTCTATGCTCAGAATCCAAGCGGAGAG
AAGTCAGCCTCTGGTTCAGACTGNAAGTAACCAACATTGATCGCCTAAAGGACTGGCATT
ACTGATGNGGATGCCGATTCATCAAAATGNTTGGGAAAACCCACAGGGGGCAAGTTTNC
ANGTCNAGGNGGACCTACTCGAGCCTGAGGATGGAATCCTTGACTNTTCTTNNCTGAT
GGGGAAAAAAACCTTNA.AAACTTGAAGGACCTGCCCGGGCGGGCGTNC.AAAACCCAATT
CCACCCCTTGGGGCGCTTCTATGGGNCCTACTCGGACCAAACTTGGGCT.AAN

48_16492.edit

TCGAGCGGGCGGGCGGGCGAGGTCTTGCAGGTCTGCAAGTGTCTTCTTCAACCATCAGGTGCA
GGGAATACCTCATGGATTCCA.TCTCAGCGCTCGAGTAGGTCAACCTGTACCTGGAAACTT
GCCCCTGTGGGCTTTCCCAAGCAATTTGATGGAA.TCGGCATCCACATCAGTGAA.TGCCAG
TCCTTTAGGGCGATCAATGTTGCTTACTGCACTGTGAACCAAGGCTGACTCTCTCCGCTT
GGAATCTGAGCATAGACACTAACCACA.TACTCCACTGTGGGCTCCAAGCCTTCAATAGTCA
TTTCTGTTTGATCTGGACCTCCAGTTT.TAGTTTTGTGGTCTCTGCTCCA.TTTTGGGAGTG
GTGGT.TACTCTGTAAACAGTAACAGGGGAAGTTGAAGGCAGGC.ACTTGACACTAATGCTGT
TGTCTGAACATCCGTC.ACTTGCATCTGGGATGCTTTGTCAA.TTTCTGTTCCGTAATTAATG
GAAATTCGCTTGGCTGCTTCCGGGGCTTGTCTCCACGGCCAGTGACAGCATAACACAGTGATG
GTATAATCAACTCCAGGTTTAAAGCCGCTGATGGTAGCTGAAACTTTGCTCCAGGC.ACAAGT
GAACTCTGACAGGGCTA.TTCCCTTCTGTTCTCCGTAAGTGATCCTGTAATATCTC.ACTGGG
ACAGCAGGANGCATTCCAAAACTTCCGGCGNACCCCTAAGCCGAA.TTNTGCAATATNC
ATCA.CACTGGCGGGCGCTCGANCA.TTCA.TAAAAGGCCCAATONCCCTATAGGGAGTNT
ANTACAATTNG

FIG. 15MM

49_16493.edit

TCGAGCGGCGCCCGGGCAGGTCACCTTTGGTTTTGGTCATGTTGGTTGGTCAAAGATA
AAAACCTAAGTTTGAGAGATGAATGCAAAGGAAAAAATATTTCCAAAGTCCATGTGAAA
TTGTCTCCCATTTTTTGGCTTTTGAGGGGGTTTCAGTTTGGGTTGCTTGTCTGTTTCCGGGTT
GGGGGAAAGTTGGTTGGGTGGGAGGGAGCCAGGTTGGGATGGAGGGAGTTTACAGGAA
GCAGACAGGGCCAACGTCC

55_16496.edit

AGCGTGGTCCGCGCCGAGGTCCTCACCAGAGGTGCCACCTACAACATCATAGTGGAGGCA
CTGAAAGACCAGCAGAGGCATAAGGTTTCGGGAAGAGGTTGTTACCGTGGGCAACTCTGTC
AACGAAGGCTTGAACCAACCTACGGATGACTCGTGCTTTGACCCCTACACAGTTTCCCAT
ATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAACTGTTGTGCCAGTG
CTTAGGCTTTGGAAGTGGTCATTTAGATGTGATTCATCTAGATGGTGCCATGACAATGGT
GTGAACCTACAAGATTGGAGAGAAGTGGGACCGTCAGGGAGAAAATGGACCTGCCCGGGC
GGCCGCTCGA

56_16496.edit

TCGAGCGGCGCCCGGGCAGGTCACCTTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGT
AGTTCACACCAATTGTCAATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAA
GCCTAAGCACTGGCACAAACAGTTTAAAGCCTGATTCAGACATTCGTTCCCACTCATCTCCA
ACGGCATAATGGGAACTGTGTACGGGTCAAAGCAGGAGTCATCCGTAGGTTGGTTCAAG
CCTTCGTTGACAGAGTTGGCCACCGTAACAACCTCTTCCCGAACCTTATCCCTCTGCTGGTC
TTTCAGTGCCTCCACTATGATGTTGTACCTGGCACCTCTGGTGAGGACCTCGGCGCGGACC
ACGCT

59_16498.edit

TCGAGCGGCGCCCGGGCAGGTCACCATAACTCCTGATACAACCACGGATGAGCTGTCA
GGAGCAAGGTTGATTTCTTTCAATGGTCCGCTCTTCTCCTTGGGGGTCACCCGCACTCGATA
TCCAGTGAGCTGAACATTTGGTGGTGTCCACTGGGCGCTCAGGCTTGTGGGTGTGACCTGA
GTGAACCTCAGGTCAGTTGGTCCAGGAATAGTGGTTACTGCAGTCTGAACCAGAGGCTGA
CTCTCTCCGCTTGGATTCTGAGCATAGACACTAACCACATACTCCACTGTGGGCTGCAAGC
CTTCAATAGTCATTTCTGTTTGAATCTCCACCTGCAGTTTATGTTTTGTTGGTCTGCTCCAT
TTTTGGGAGTGGTGGTTACTCTGTAAACAGTAACAGGGGAACCTGAAGGCAGCCACTTGAC
ACTAATGCTGTTGTCTGAACATCGGTCACTTGCATCTGGGATCGTTTGNCAATTTCTGTTT
GGTAATTAATCGAAATTTGGCTTGTCTCTGGGGGCTGTCTCCACGGCCAGTGACAGCATA
CACAGNGATGGNATNATCAACTCCAAGTTTAACGCCCTCATGGTAACCTTTAACTTGTCTCC
CAGCCAGNGAACCTCCGGACACGGTAATTTCTCTGGTTTTCCGAAAGNGANCCTGGAAATN
TCTCCTTGGANCAGAAAGGANCNTCCAAAACCTTGGCCCGGAACCCCTT

FIG. 15.VV

60_16473.edit

AGCGTGGTCCGGGCGGAGGTCTGT.CAGAGTGGCACTGGT.AGAAGTTCCAGGAACCCTGA
ACTGTAAGGGTTCTTCATCAGTGCCAAC.AGGATGACATGAAATGATGTAAGTGTGTC
CTGGAATGGGGCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGTCTACATTCGGCGGG
TATGGTCTTGGCCTATGCCCTTATGGGGCTGGCGGTTGTGGGCGGTGTGGTCCGCCTAAAAC
CATGTTCTCAAAGATC.ATTTGTGCCCCAACACTGGGTTGCTGACCAGAAGTGCCAGGAAG
CTGAATACCATTTCCAGTGT.CATACCCAGGGTGGGTGACGAAAGGGGTCTTTTGAAGTGTG
GAAGGAACATCCAAGATCTCTGGTCCATGAAGATTGGGGTGTGGAAGGGTTACCAAGTTGG
GGAAGCTCGTCTGTCTTTTTCTTCCAATC.AGGGGCTCGCTCTTCTGATTATTCTTCAGGGC
AATGACATAAAATTGTATATTCCGTTCCCGGTTCCAGGCCAGTAATAGTAGCCTCTTGTGAC
ACCGCGGGGGCCANGGACCACTTCTCTGGGANGAGACCCAGCTTCTCATACTTGATGAT
GTAACCCGGTAATCCTG.CACGTGGCGGCTGNCATGATACCANCAAGGAATTGGGTGNGGN
GGACCTGCCCGGCGGCCCTCNA

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AGCGTGGTCCGGGCGGAGGTCTGGGATGCTCCTGCTGT.CACAGTGAAGATATTACAGGATC
ACTTACGGAGAA.ACAGGAGGAA.ATAGCCCTGTCCAGGAGTTCACTGTGCCTGGGAGCAAG
TCTACAGCTACCATCAGCGGCCCTT.AAACCTGGAGTTGATTATACCATC.ACTGTGTATGCTG
TCACTGGCCGTGGAGACAGCCCCCGCAAGCAGCAAGCCAATTTCCATTAAATTACCGAACAG
AAATTGACAAACCATCCCAGATGCAAGTGACCGATGTTCAAGGACAACAGCAATTAGTGTC.A
AGTGGCTGCCTTCAAGTTCCCGTGTACTGTTACAGAGTA.ACC.ACCACTCCC.AAAAATGG
ACCAGGACCA.ACA.AAA.ACT.AAA.ACTGCAGGTCCAGATC.AAACAGAAATGACTATTGAAG
GCTTGCAGCCCACAGTGGAGTATGTGCTTAGTGTCTATGCTCAGAAATCCAAGCGGAGAGA
GTCAGCCTCTGCTT.CAGACTGCAGTA.ACCACTATTCCTGCACCA.ACTGACCTGAAGTTAC
TCAGGT.CAC.ACCCA.AAAGCTTGAGCCGGCAGTGGACACCACCCAATGTTCACTCACTGGAT
ATCGAGTGGGGTGACCCCAAGGAGAAAGACCCCGACCCATGAAAGAAATCAACCTTGCT
CCTGACAGCTCATCCCGGGGTGTATCAGGACTTATGGGGGACTGCCCCGGCNGGCCGNTC
GAAANCGAATTNTGAAATTCCTT.CNCACTGGGNGGCCNTTCGAGCTTNCCTTNTANANGGC
CCAATTNCCTNTAGNCGGCTCTN

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AGCGTGGTCCGGGCGGAGGTCNAGGA

62_16483.edit

TCGAGCGCGCGCGCGCGGAGGTCCACCAACCCAAATTCCTTGCTGGTATCATGGCAGCCGC
CACGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCCAGAGA
AGTGGTCCCTCGGCCCCCGCTGGTGT.CACAGAGGCTACTATTACTGGCCTGGAACCGGA
ACCGAATATACAATTTATGTCA.TTGGCCTGAAGAATAATCAGAAGAGCGAGCCCCCTGATTG
GAAGG.AAAAACACAGAGGAGCTTCCCAACTGGTAACCTTCCACACCCCAATCTTCATG
GACCAGAGATCTTGGATGTTCTT.CCAGAGTTCAAAAGACCCCTTTCGT.CACCCACCCCTGG
GTATGACACTGGAAATGCTA.TTACGCTTCTGGCACTTCTGGTCAGCAACCCAGTGTGGG
CAACAAATGATCTTTGAGCAACATGCTTTAGGGGGACCACACCGCCCAACACGGGGACC
CCCATAAAGNATAGGCCAAGACCATACCCCGCCGAATGTAGGACAAGAAGCTCTNTCTCA
ACAACCATCTCATGGGGCCCAATCCAGGACACTTCTGAGTACATCATTTTCATGTATCCTG
GTGGGCACCTTGATGAANAACCTTACAGTT.CAGGGTTCTTGGAACTTCT.ACCAGNGCCACT
TCTGACAGGANCTTGGGCGNGACCAACCT

FIG. 1500

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AGCGTGGTTCGGGCGGAGGTCCATTTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGTAG
TTCACACCATGTGTCATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAAGC
CTAAGCACTGGCACAACAGTTTAAAGCCTGATTGAGACATTCGTTCCCACTCATCTCCAAC
GGCATAATGGGAAACTGTGTAGGGGTCAAAGCACGAGTCATCCGTAGGTTGGTTCAAGCC
TTCGTTGACAGAGTTGCCCACGGTAACAACTCTTCCCGAACCTTATGCCTCTGCTGGTCTT
TCAGTGCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTGCCCCGGGCGGCC
GCTCGA

64_16493.edit

AGCGTGGTTCGGGCGGAGGTGTGCCCCAGACCAGGAATTCGGCTTCGACGTTGGCCCTGTC
TGCTTCCTGTAAACTCCCTCCATCCCAACCTGGCTCCCTCCCAACCAACTTTCCCCC
AACCCGGAACAGACAAGCAACCCAACTGAACCCCTCAAAAGCCAAAAAATGGGAG
ACAATTTACATGGACTTTGGAAAATATTTTTCTTTGCAATTCATCTCTCAAACCTTAGTT
TTTATCTTTGACCAACCGAACATGACCAAAAAACCAAAAGTGACCTGCCCCGGGCGGCCGCTC
GA

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TCGAGCGCGCGCGCGGGCAGGTCTCACCAGAGGTGCCACCTACAACATCATAGTGGAGG
CACTGAAAGACCAGCAGAGGCATAAGGTTTCGGGAAGAGGTTGTTACCGTGGGCAACTCTG
TCAACGAAGGCTTGAACCAACCTACCGATGACTCGTGCTTTGACCCCTACACAGTTTCCCA
TTATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAACTGTTGTGCCAG
TGCTTAGGCTTTGGAAGTGGTCATTTGAGATGTGATTCATCTAGATGGTGCCATGACAATG
GTGTGAACCTACAAGATTGGAGACAAGTGGGACCGTCAGGCAGAAAAATGGACCTCGGCGG
CGACCACCT

FIG. 15PP

16501.edit

TCGAGCGGGCCCGGGGAGGTACCGGGGTGGTCAGCGAGGAGCCATTCACACTGAACTT
CACCATCAACAACTGCGGTATGAGGAGAACATGCAGCACCTGGCTCCAGGAAGTTCAA
CACCACGGAGAGGGTCCTTCAGGGCCTGCTCAGGTCCCTGTTCAAGAGCACCAAGTGTGGC
CCTCTGTACTCTGGCTGCAGACTGACTTTGCTCAGACCTGAGAAAACATGGGGCAGCCACTG
GAGTGGACGCCATCTGCACCCTCCGCCCTTGATCCCCTGGTACTGGACTGGACANANAGCG
GCTATACTTGGGAGCTGANCCNAACCTTTGGCGGNGACNCCNCTT

16501.2.edit

GAGGACTGGCTCAGCTCCCAGTATAGCCGCTCTCTGTCCAGTCCAGGACCAGTGGGATCAA
GGCGGAGGGTGACAGATGGCGTCCACTCCAGTGGCTGCCCCATGTTTCTCAAGTCTGAGCAA
AGNCAGTCTGCAGCCAGAGTACAGAGGGCCAACTGCTGCTCTTGAACAGGGACCTGAG
CAGGCCCTGAAGGACCCTCTCCGTGGTGTGAACTTCTGGAGCCAGGGTGGTGCATGTTT
TCCTCATACCGCAGGTTGTTGATGGTGAAGTTCAAGTGTGAATGGCTCCTCGCTGACCACCC

16502.1.edit

AGCGTGGTCCGCGGCGGAGGTCCACCACACCCAAATTCCTTGCTGGTATCATGGCAGCCGCCA
CGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCAGAGAA
GTGGTCCCTCGGCCCCCCCCCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGGAA
CCGAATATACAATTTATGTCAATGCCCTGAAGAATAATCAGAAGAGCGAGCCCCCTGATTGG
AAGGAAAAAGACAGACGAGCTTCCCCAACTGGTAACCCCTTCCACACCCCAATCTTCATGG
ACCANANANCTTGGATNGTCTTTCACTGGTTNAAAAAACCCCTTTTCGCCCCCCCCACCTTG
GGGATTAACCTTGGGAAANGGGGAATTNACCNCTTC

16502.2.edit

TCGACCGGGCCCGGGGAGGTCTCTGTCAGAGTGGCACTGGTAGAAGTTCCAGGAACCCCT
GAACTGTAAGGCTTCTTCATCAGTCCCAACAGGATGACATGAAATGATGTACTCAGAAAGT
GTCCTGGAATGGGGCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGTCTACATTGGGC
GGGTATGGTCTTGGCCTATGCCCTTATGGCGGTGGCCGTTGTGGGCGGTGTGGTCCGCCTAA
AACCATGTTCTCAAAGATCAATTTGTTGCCCAACACTGGGTTCTGACCAGAAGTGGCAGG
AAGCTGAATACCATTTCCAGTGTCAACCCAGGGNGGGTGACCAAAGGGGGTCNTTTNGA
CCTGGNGAAAGGAACCATCCAAAANCTCTGNCCCATG

FIG. 15QQ

16503.1.edit

AGCGTGGNCGCGGCGGAGGTCTGAGGATGTAACTCTTCCCAGGGGAAGGCTGAAGTGCT
GACCATGGTGCTACTGGGTCTTCTGAGTCAGATATGTGACTGATGNGAACTGAAGTAGGT
ACTGTAGATGGTGAAGTCTGGGTGTCCCTAAATGCTGCATCTCCAGAGCCTTCCATCATT
CCGTTTCTTCTTTTGCTATGGGATGAGACACTGTTGAGTATTCTCTAAAGTCACCACTGAAA
TCTTCTCCAAAGGAAAACCTGTGGA-AAAGCCCCCTTATTCTGCCCCATAATTTGGTTCTCC
TAATCCTCTGAAATCACTATTTCCCTGGAANGTTTGGGAAAAANNGGGCNACCTGNAN
TGGAANTGGATANAAAGATCCCACCAATTTACCCAACNAGCAGAAAGTGGAANGGTAC
CGAAAAGCTCCAAGTAANAAAAAGGAGGGAAGTAAAGGTCAAGTGGGCACCAGTTTCAA
ACAAAACCTTCCCCAACTATANAACCA

16503.2.edit

AAGCGGCCGCCCCGGGCAGGNACAGNAGTGCTTGGGACTGGGNTCACCCCCAGGTCTGC
GGCAGTTGTCACAGCGCCAGCCCCGCTGGCCTCCAAAGCATGTGCAGGAGCAAAATGGCAC
CGAGATATTCTTCTGCCACTGTTCTCTACGTGGTATGTCTTCCCATCATCGTAACACGTT
GCCTCATGAGGGTCACACTTGAATTCCTTTTCCGTTCCCAAGACATGTGCAGCTCATTTG
GCTGGCTCTATAGTTTGGGGAAAGTTTGTGAAACTGTGCCACTGACCTTTACTTCCTCCTT
CTCTACTGGAGCTTTCCGTACCTTCCACTTCTGCTGNTGGNAAAAAGGGNNGGAACNTCTTA
TCAATTTCAATTGGACAGTANCCCNCTTTCTNCCCAAAACATNCAAGGGAAAAATATTGATTN
CNAGAGCGGATTAAGGAACAACCCNAATTATGGGGGCCAGAAATAAAGGGGGCTTTTCCA
CAGGTNTTTTCT

16504.1.edit

TCGAGCGCGCCGCCCCGGGCAGGTCTGCAGGCTATTGTAAGTGTCTGAGCACATATGAGAT
AACCTGGGCGCAAGCTATGATGTTCCATACGTTAGGTGTATTAATGCACTTTTGACTGCCA
TCTCAGTGGATGACAGCCTTCTCACTGACAGCAGAGATCTTCTCACTGTGCCAGTGGGCA
GGAGAAAGAGCATGCTGCCACTCGACCTCGCCCCGCGACCACGCT

16504.2.edit

AGCGTGGTGGCGGCGGAGGTCCAGTCCAGCATGCTCTTTCTCCTGCCCCACTGGCACAGTG
AGGAAGATCTCTGCTGTCACTGAGAAAGGCTGTCACTCACTGAGATGGCAGTCAAAAAGTGC
ATTTAATACACCTAACGTAACGAACATCATAGCTTGGGCCAGGTTATCTCATATGTGCTCA
GAACACTTACAATAGCCTCCAGACCTGCCCCGGGCGCCCCGCTCGA

FIG. 15RR

16505.1.edit

CGAGCGGCGCGCGCGGCGAGGTCCAGACTCCAATCCAGAGAACCACCAAGCCAGATGTCAG
AAGCTACACCATCACAGGTTTACAACCAGGCACTGACTACAAGATCTACCTGTACACCTTG
AATGACAATGCTCGGAGCTCCCCCTGGTTCATCGACGCTCCACTGCCATTGATGCACCAT
CCAACCTGCGTTTCTGGCCACCACACCCAAATTCCTTGCTGGTATCATGGCAGCGGCCACG
TGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCCAGAGAAGT
GGTCCCTCGGCCCCCGCCCTGGTGNACAGAAGCTACTATTACTGGCCTGGAACCGGGAACC
GAATATACAATTTATGTCAATTGCCCTGAAGAATAATCANAAGAGCGAGCCCCCTGATTGGA
AGG

16505.2.edit

AGCGTGGTCGCGGCGCGAGGTCTGTACAGAGTGGCACTGGTAGAAGTTCCAGGAACCCCTGA
ACTGTAAGGGTTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGTC
CTGGAATGGGGCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGCTCTGCTTTTCTTC
CAATCAGGGGCTCGCTCTTCTGATTATTCTTCAGGGCAATGACATAAATTGTATATTGGTT
CCCGGTTCCAGGCCAGTAATAGTAGCCTCTGTGACACCAGGGCGGGGCGAGGGACCACT
TCTCTGGGAGGAGACCCAGGCTTCTCATCTTGATGATGTANCCGGTAATCCTGGCACCGT
GGCGGCTGCCATGATACCAGCAAGGAATTGGGTGTGGTGGCCAAGAAACGCAGGTTGGAT
GGTGCATCAATGGCAGTGGAGGCTCGATNACCACAGGGGAGCTCCGANCAATTGTCAATC
AAGGTGGACAGGTAGAATCTTGTATCAGGTGCCTGGTTTGTAAACCTG

16506.1.edit

TCGACCGGCGCGCGCGCGGCGAGGTTCTGACCGGTGACCTCGAGGTGGACACCACCTCAAG
AGCCTGAGCCAGCAGATCGAGAACATCCCGAGCCAGAGGGCAGCCGCAAGAACCCCGC
CCGCACCTGCCGTGACCTCAAGATGTGCACTCTGACTGGAAGAGTGGAGAGTACTGGAT
TGACCCCAACCAAGGCTGCAACCTGCAATCAAAAGTCTTCTGCAACATGGAGACTGGT
GAGACCTCGGTGACCCCACTCAGCCAGTGTGGCCCAAGAAGAACTGGTACATCAGCAAG
AACCCCAAGGACAAGAAGCAATGTCTGCTTCCGGCAAGCAATGACCGATGGATTCCAGTTC
GAGTATGGCGGCCAGGGCTCCGACCTCCGATGTGGACCTCGGCGCGGACCAAGCTAAG
CCCGAAATCCAGCACACTGCGCGCCCTTACTAGTGGCATCCGAGCTTCCGTACCAAGCTTG
CGGTAATCATGGGNCATAGCTGTTCTGNGTGAAAATGCTATTCCGCTTCAAAATTTCCC
AC

16506.2.edit

AGCGTGGTCGCGGCGCGAGGTCCACATGGCAGGGTCCGAGCCCTGGCCGCCATACTCGAA
CTGGAATCCATCGGTCAATGCTCTGCGGAACCAAGACATGCCTCTTGCTCTTGGGGTTCTTGC
TGATGTACCAGTTCTTCTGGGCACTGCGGCTGAGTGGGCTACACGCAGGTCTCACCAGT
CTCCATGTTCCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATCCAG
TACTCTCCACTCTTCCAGTCAGAGTGGCACATCTTGAGGTACCGGCAGGTGCGGCGGGGT
TCTTGGCGGCTGCCCTCTGGGCTCCCGATGTTCTCGATCTGCTGGCTCAAGCTCTTGAAGGT
GGTGTCCACCTCGAGGTACGGTCACGAACCTGCCCGGGCGGCGGCTCGA

FIG. 15SS

16507.1.edit

AGCGTGGTCGCGGCCGAGGTCAAGAACCCCGCCCGCACCTGCCGTGACCTCAAGATGTGC
CACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGAT
GCCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCCGTGTACCCCACTCAGCCCA
GTGTGGCCCAGAAGAACTGGTACATCAGCAAGAACCCCAAGGACAAGAGGCATGTCTGGT
TCGGCGAGAGCATGACCGATGGATTCCAGTTCGAGTATGGCGGCCAGGGCTCCGACCCTG
CCGATGTGGACCTGCCCGNGCCGNGCCGCTCGAAAAGCCNAATTTCCAGNCACACTTGG
CCGGCCGTTACTACTG

16507.2.edit

TCGAGCGGCCCGCCCGGGCAGGTCCACATCGGCAGGGTCCGAGCCCTGGCCGCCATACTCG
AACTGGAATCCATCGGTCAATGCTCTCGCCGAACCAGACATGCCCTCTTGTCTTGGGGTTCT
TGCTGATGTACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACC
AGTCTCCATGTTGCAGAAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATC
CAGTACTCTCCACTCTTCCAGTCAGAGTGGCACATCTTGAGGTCACGGCAGGTGCGGGCGG
GGTTCTTGACCTCGGCCGCGACACGCT

16508.1.edit

CGAGCGGCCCGCCCGGGCAGGTCCCCCCCCCTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
TT

16508.2.edit

AGCGTGGTCGCGGCCGAGGTCTGGCAATCCTTCGACTTCTCTCCAGCCGAGCTTCCCAGAA
CATCACATATCACTGCCAAAAATAGCAATGCATACATGGATCAGGCCAGTGGAAATGTAAA
GAAGGCCCTGAAGCTGATGGGGTCAAATGAAGGTGAATTCAAGGCTGAAGGAAATAGCA
AATTCACCTACACAGTTCTGGACGATGGTTGCACGAAACACACTGGGGAAATGGAGCAAAA
CAGTCTTTGAATATCGAACACGCAAGGCTGTGAGACTACCTATTGTAGATAATTGCACCCTA
TGACATGGTGGTCCTGATCAAGCAATTTGGTGTGCACGTTGGCCCTGTTTGCTTTTTATAAA
CCAACTCTATCTGAAATCCCAACAAAAAAATTAATCCATATGTGNTCCTCTTGTCT
AATCTTGGCAACCAAGTGCAAGTGACCGACAAAAATCCAGTTATTTATTTCCAAAATGTTTG
GAAACAGTATAATTTGACAAAAGAAAAAGGATACTTCTTTTTTTTGGCTGGTCCACCAAA
TACAATTCAAAAGGCTTTTTTGGTTTTATTTTTTANCCAATTCCAATTCAAAATGTCTCAA
TGGNGCTTATAATAAAATAAACTTTCAACCTTTNTTNTGAT

FIG. 15TT

16509.1.edit

AGCGTGGTTCGCGGCCGAGGTCTGGGATGCTCCTGCTGTACAGTGAGATATTACAGGATC
ACTTACGGAGAAACAGGAGGAAATAGCCCTGTCCAGGAGTTCACTGTGCCTGGGAGCAAG
TCTACAGCTACCATCAGCGGCCCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
TCACTGGCCCGTGGAGACAGCCCCGCAAGCAGCAAGCCAATTTCCATTAAATTACCGAACAG
AAATTGACAAACCATCCCAGATGCAAGTGACCGATGTTACAGGACAACAGCATTAGTGTCA
AGTGGCTGCCTTCAAGTTCCCTGTTACTGGTTACAGAAGTAACCACCACTCCCAAAAATG
GACCAGGACCAACAATACTAACTGACAGGTCCAGATCAAACAGAAAATGGACTATTG
AAGGCTTGCAGCCACAGTGGAAGTATGTGGNTAGGNGTCTATGCTCAGAATCCCAAGCC
GGAGAAAGTCAGCCTTCTGGTTTAGACTGCAGTAACCAACATTGATCGCCCTAAAGGACT
GGNCATTCACTTGGATGGTGGATGTCCAATTC

16509.2.edit

TCGAGCGGCCCGCCCGGGCAGGTCTTGCAGCTCTGCAGNGTCTTCTTCACCATCAGGTGCA
GGGAATAGCTCATGGATTCCATCCTCAGGGCTCGAGTAGGTACCCCTGTACCTGGAAACTT
GCCCCGTGTGGCCTTTCCCAAGCAAATTTTGATGGAATCGACATCCACATCAGNGAATGCCAG
TCCTTTAGGGCGATCAATGTTGGTTACTGCACTGTAACCAAGAGGCTGACTCTCTCCGCTT
GGATTCTGAGCATAGACACTAACCACATACTCCACTGTGGGCTGCAAGCCTTCAATAGTCA
TTTCTGTTTGATCTGGACCTCCAGTTTAAAGTTTTTGGTGGTCTGNCCTATTTTGGGAAG
TGGGGGGTTACTCTGTAACCAAGTAACAGGGGAAGTTGAAGGCAGCCACTTGACACTAATG
CTGTTGCTCTGAACATCGGTCCTTGCATCTGGGGATCGTTTTGACAAATTTCTGGTTCGGCA
AATTAATGGAAAATGGCTTCTGCTTGGCGGGGCTGNCCTCCACGGGCCAGTGACAGCATA
C

16510.1.edit

TCGAGCGGCCCGCCCGGGCAGGTCTTGCAGCTCTGCAGTGCTTCTTCACCATCAGGTGCA
GGGAATAGCTCATGGATTCCATCCTCAGGGCTCGAGTAGGTACCCCTGTACCTGGAAACTT
GCCCCGTGTGGCCTTTCCCAAGCAAATTTTGATGGAATCGACATCCACATCAGTGAATGCCAG
TCCTTTAGGGCGATCAATGTTGGTTACTGCACTGTAACCAAGAGGCTGACTCTCTCCGCTT
GGATTCTGAGCATAGACACTAACCACATACTCCACTGTGGGCTGCAAGCCTTCAATAGTCA
TTTCTGTTTGATCTGGACCTCCAGTTTAAAGTTTTTGGTGGTCTGNNCCATTTTGGGGAA
GGGGTGGTTACTCTTGTAAACCAAGTAACAGGGGAAGTTGAAGCAGCCACTTGACACTAATG
CTGGTGGCCTGAACATCGGTCCTTGCATCTGGGAAGGTTTGGTCAATTTCTGTTCCGGTAAT
TAATGGGAAAATGGCTTACTGGCTTGGCGGGGCTGTCTCCACGNCAGTGACAAGCATAAC
ACAGGNGATGGGTATAATCAACTCCAGGTTAAAGGCCNCTGATGGTA

16510.2.edit

AGCGTGGTTCGCGGCCGAGGTCTGGGATGCTCCTGCTGTACAGTGAGATATTACAGGATC
ACTTACGGAGAAACAGGAGGAAATAGCCCTGTCCAGGAGTTCACTGTGCCTGGGAGCAAG
TCTACAGCTACCATCAGCGGCCCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
TCACTGGCCCGTGGAGACAGCCCCGCAAGCAGTAAGCCAATTTCCATTAAATTACCGAACAG
AAATTGACAAACCATCCCAGATGCAAGTGACCGATGTTACAGGACAACAGCATTAGTGTCA
AGTGGCTGCCTTCAAGTTCCCTGTTACTGGTTACAGAGTAACCACCACTCCCAAAAATGG
GACCAGGACCAACAATACTAACTGCANGGTCCAGATCAAACAGAAAATGACTATTG
AAGGCTTGCAGCCACAGTGAGTATGTGGTTAGTGTCTATGCTCAGAAATNCCAAGCGG
AGAGAGTCAGCCTCTGGTTCAGACT

FIG. 15U

16511.1.edit

TCGAGCGGCGCGCGGGCAGGTCAGCGCTCTCAGGACGTCACCACCATGGCCTGGGCTCT
GCTCCTCCTCAECCTCCTCACTCAGGGGCACAGGGTCCTGGGCCCAGTCTGCCCTGACTCAG
CCTCCCTCCGCGTCCGGGTCTCCTGGACAGTCAGTCACCATCTCCTGCACTGGAACCAGCA
GTGACGTTGGTGTCTTATGAAATTTGTCTCCTGGTACCAACAACACCCAGGCAAGGCCCCCAA
ACTCATGATTTCTGAGGTCACTAAGCGGGCCCTCAGGGGTCCCTGATCGCTTCTCTGGCTCC
AAGTCTGGCAACACGGGCTCCCTGACCGTCTCTGGGCTCCANGCTGAGGATGANGCTGATT
ATTACTGGAAGCTCATATGCAGGCAACAACAATTGGGTGTTCCGGCGGAAGGGACCAAGCT
GACCGTNCTAAGGTCAAGCCCAAGGCTTGCCCCCTCGGTCACTCTGTTCCCACCTCCTCT
GAAGAAGCTTTCAAGCCAACAANGNCACACTGGGTGTGTCTCATAAGTGGACTTCTACCC

16511.2.edit

AGCGTGGTCCGGGCGGAGGTCTGTAGCTTCTGTGGGACTTCCACTGCTCAGGCGTCAGGCT
CAGGTAGCTGCTGGCCGCGTACTTGTGTTGCTTTGNTTGGAGGGTGTGGTGGTCTCCACT
CCCGCTTGACGGGGCTGCTATCTGCCCTCCAGGCCACTGTCACGGCTCCCGGGTAGAAGT
CACTTATGAGACACACCAGTGTGGCCTTGTGGCTTGAAGCTCCTCAGAGGAGGGTGGGA
ACAGAGTGACCGAGGGGGCAGCCTTGGGCTGACCTAGGACGGTCAGCTTGGTCCCTCCGC
CGAACACCCAATTGTTGTTGCCCTGCATATGAGCTGCAGTAATAATCAGCCTCATCCTCAGC
CTGGAGCCCAGAGACNGTCAAGGGAGGCGCGTGTGTTGCCAAGACTTGAAGCCAGANAAG
CGATCAGGGACCCCTGAGGGCGCGCTTACNGACCTCAAAAAATCATGAATTTGGGGGGCC
TTTGCTTGGGNGTTGGTTGGTNACCAGNAAAAACAAAATTCATAAAGCACCAACGTCCT
GCTGGTTTCCAGTGCANGAANAATGGTGAAGTGAANTGTCC

16512.1.edit

AGCGTGGTCCGGGCGGAGGTCCAGCATCAGGAGCCCCCGCCTTGCCGGCTCTGGTCATCGCC
TTTCTTTTGTGGCCTGAAACGATGTCTCAATTCGCAGTAGCAGAACTGCCGTCTCCACTG
CTGTCTTATAAGTCTGCAGCTTACAGGCCAATGGCTCCCATATGCCCAAGTTCCTTCATGTCC
ACCAAAGTACCCGTCTCACCAATTAACACCCAGGTCTCACAGTTCTCCTGGGTGTGCTTGG
CCCGAAGGGAGGTAAGTANACGGATGGTCTCGGTCCACAGTCTTGGATCAGGGTACGAG
GAATGACCTCTAGGGCCTCGCCNACAAACCCCTGTATGGACCTGCCCCGGCGGGCCCCGCTC
GA

16512.2.edit

TCGAGCGGCGCGCGCGGAGGTCCATACAGGGCTGTTGCCAGGGCCCTAGAGGNCATTCC
TTGTACCCTGATCCAGAACTGTGGGACCAAGCACCATCCGTCTACTTACCTCCCTTCGGGGCC
AAGCACACCCAGGAGAACTGTGAGACCTGGGGTGTAATGGNGAGACGGGTACTTTGGTG
GACATGAAGGAACCTGCCCATATGGGACCAATTGGCTGNCAGCTGCANACTTATAAGACA
GCACTGGAGACGGGAGTTCTGCTACTCCCAATTGATCACAATCGTTTCAGGCCACAAAAAG
AAAGGCGATGACCANACCGGGCAAGGGCGGGCTTCTGATGCTGGACCTCGGCCGCGGAC
CACGCTT

FIG. 15VV

16514.1.edit

AGCGTGGTCGCGGCCGAGGTCCACTAGAGGTCTGTGTGCCATTGCCAGGCAGAGTCTCTG
CGTTACAAAGTCCTAGGAGGGCTTGCTGTGCGGAGGGGCTGCTATGGTGTGCTGCGGTTCA
TCATGGAGAGTGGGGCCAAAGGCTCCGAGGTTGTGGTGTCTGGGAACTCCGAGGACAGA
GGGCTAAATCCATGAAGTTTGTGGATGGCCTGATGATCCACAGCGGAGACCCTGTTAACTA
CTACGTTGACACTGCTGTGCGCCACGTGTTGCTCANACAGGGTGTGCTGGGCATCAAGGTG
AAGATCATGCTGCCCTGGGACCCANCTGGCAAAAAATGGCCCTTAAAAACCCCTTGCCNTG
ACCACGTGAACCAATTTGTGNGAACCCCAAGATGAANATACTTGCCCACCACCCCCCATTC

16514.2.edit

TCGAGCGGCCGCCCCGGGCAGGTCTGCCAAGGAGACCCTGTTATGCTGTGGGGAAGTGGCTG
GGGCATGGCAGGCGGCTCTGGCTTCCCACCCCTTCTGTTCTGAGATGGGGGTGGTGGGCAGT
ATCTCATCTTTGGGTTCCACAATGCTCACGTGGTCAGGCAGGGGCTTCTTAGGGCCAATCT
TACCAGTTGGGTCCCAGGGCAGCATGATCTTCACCTTGATGCCCAGCACACCCTGTCTGAG
CAACACGTGGCGCACAGCAGTGTCAACGTAGTAGTTAACAGGGTCTCCGCTGTGGATCAT
CAGGCCATCCACAAACTTCATGGATTAGCCCTCTGTCTCGGAGTTTCCCAAAACACCCAC
AACCTCGCCAGCCTTTGGGGCCCCACTTCTTCATGAATGAAACCGCAGCACACCAATTANCAA
GGCCCTTCCGCACAGGNAAGCCCTTCTTAAGGAGTTTGTAAACGC.AAAAAACTCTTGCCCT
GGGGCAATGGGCACACAGACCTNTANTNGGACCTTGGNCCCGCAACCACCGCTT

16515.1.edit

AGCGTGGTCGCGGCCGAGGTCTGCGCCCTCTGSCAAGGCTCCTGAAGATGGTCAACCCTGG
AAAACCCGGACCACTGCTGAGAGAGGAGTTGTTGGACCACAGGGTGTCTCGTGGTTTCCC
TGGAACTCCTGGACTTCTGCTTCAAAGCCATTAGGGGACACAAAGGTCTGGATGGATTG
AAGGGACAGCCCCGTCTCTCTGCTGTAAGGGTGAACCTCGNGCCCCCTGGTGAAAATGGA
ACTCCAGGTCAAACAGGAGCCCCGNGCCCTTCTGGNGAGACAGGACGTGTTGGTGGCCCT
GGCCCANACCTGCCCCGGGGGGGCTCNAAAAGCCGAAATCCAGNACACTGGCGGGCCGNT
ACTANTGGAATCCGAACCTTGGCTACCAAAGCTTGGCCGTAATCATGGCCATAGCTTGTTC
CTGGGGNGGAAAATGCTATTCCGCTNCCAAATCCACACACATACCGAACCCGGAAAGCA
TTAAAGTGTAAAAGCCCTGGGGGGGCTAAATGANGTGAGCNTAACTCNCATTTAAATGG
CGTTGCGCTTCACTGCCCCGCTTTTCCAGTCCGGNA

16515.2.edit

TCGATCGGGCCGCCCCGGGCAGGTCTGGGGCAGGGGCACCAACACGTCTCTCTCACCAGGA
AGCCCACGGGCTCTGTTTGACCTGGAGTTCCAATTTTACCAGGGGCACCAGGTTACCCCT
TCACACCAGGAGCACCGGGCTGTCCCTTCAATCCATCCAGACCAATTGTGNCCCTAAATGCC
TTTGAAGCCAGGAAGTCCAGGAGTTCAGGGAAACCACGAGCACCCCTGTGCTCCAACAAC
TCCTCTCTCACCAGGTGCTCCGGCTTTTCCAGGGTGACCATCTTACCAGCCTTGCCAGGA
GGGCCAGACCTCGGGGGGGACCAAGCT

FIG. 15WW

16516.1.edit

ANCGTGGTCCGGGCGGAGGTCTCACCAGAGGTGNCACCTACAACATCATAGTGGAGGCA
CTGAAAGACCEANCAGAGGCATAAGGTTCCGGGAAGAGG

16516.2.edit

TCGAGCGGCGCGCGGGCAGGTCCATTTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGT
AGTTCACACCAATTGTATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAA
GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTTCAGACATTTCGTTCCCACTCATCTCCA
ACGGCATAATGGGAAACTGTGTAGGGGTCAAAGCACGAGTCATCCGTAGGTGTTGTTCAAG
CCTTCGTTGACAGAGTTGTCCACGGTAACAACTCTTCCCGAACCTTATGCCTCTGCTGGTC
TTTCAGTGCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTCNGNCCNGAAC
AACGCTTAAGCCCCGNATTCTGCAGATAATCCCATCACACTTGGCGGGCGCTTCGANCATG
CATCNTAAAAGGGGCCCCAAATTTCCCCCTTAAGNGAANCCGTATTTNCCAAATTTCACTG
GNCCCCCGNTTTTACAAACGNCGGTGAACTGGGGAAAAACCCTGGCGGTTACCCCACTT
TAATCGCCNTTGGCAGCACAAATCCCCCTTTTCGNCCANCNTGGGCGTAAATAACCGAAAA

16517.1.edit

ANCGNGGTCCGGGCGGANGTNTTTTTCTNTTTTTT

16518.1.edit

AGCGTGGTCCGGGCGGAGGTCTGAGGTTACATGCCGTGGTGGTGGACGTGAGCCACGAAGA
CCCTGAGGTCAAGTTCAACTGGTACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAA
GCCCGCGGAGGAGCACTACAAACAGCAGTACCGGCGGTCAGCGTCCTCACCCTCCTGCA
CCAGAATTGCTTGAATGGCAAGGAGTACAAGNGCAAGGTTTCCAAACAAGCCNTCCCAGC
CCCCNTCGAAAAAACCAATTTCCAAAGCCAAAGGGCAGCCCCGAGAACCAACAGGTGTACAC
CCTGCCCCCATCCCCGGAGGAAGAAGANCAANAACCCNGGTTACGCCTTAACCTTGGTTC
NAANGCTTTTTATCCCAACGNACTTCCCCCNTGGAANTGGGAAAAACCAATGGGCCAANC
CGAAAAACAATTACAANAACCCC

16518.2.edit

TCGAGCGGCGCGCGGGCAGGTGTCCGAGTCCAGCACGGGAGGCGTGGTCTTGTAGTTGT
TCTCCGGCTGCCCCATTGCTCTCCCACTCCACGGCGATGTCGCTGGGATAGAAGCCTTTGAC
CAGGCAGGTGAGGCTGACCTGGTCTTGGTCACTCTCTCCCGGATGGGGGCAGGCTGAA
CACCTGGGCTTCTCGGGGCTTCCCCCTTGGTTTGAANAATGGTTTTCTCGATGGGGGCTCG
AAGGGCTTTGTTGNAACCTTCCACTTCACTCCTTCCCAATTCACCCAGNCCTGGNCCAGGA
CGGNGAGGACNCTNACCACACGGAACCGGGCTGGTGGACTGCTCC

FIG. 15XX

16519.1.edit

AGCGTGGTCGCGGACGANCTCCTGTCAGAGTGGNACTGGTAGAAGTTCCANGAACCCCTGA
ACTGTAAGGGTTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGNGN
CCTGGAATGGGGCCCCATGANATGGTTGCC

16519.2.edit

TCGAGCGGGCCCGGGCAGGTCCACCACACCCAATTCTTGCTGGTATCATGGCAGCCGC
CACGTGCCAGGATTACCGGCTACATCAAGTATGAGAAGCCTGGGTCTCTCCAGAGA
AGTGGTCCCTCGGGCCCGCCCTGGTGTCAAGAGGGCTACTATTACTGGCCTGGAACCGGGA
ACCGAATATACAATTTATGTCAATTGCCCTGAAGAATAATCAGAAGAGCGAGCCCTGATTG
GAAGGAAAAAGACAGACGAGCTTCCCCAACTGGTAACCCTTCCACACCCCAATCTTCATG
GACCAGAGATCTTGGATGTTCTTCCACAGTTCAAAAGACCCCTTTCGGCACCCCCCTGG
GTATGAACCTGGGAAAANGGNANTTAANCTTTCCTGGCA

16520.1.edit

AGCGTGGTCGCGGCGGAGGTCTGGGATGCTCTCTGCTGTACAGTGAGATATTACAGGATC
ACTTACGGAGAAACAGGAGGAAAATAGCCCTGTCCAGGAGTTCACTGTGCCTGGGAGCAAG
TCTACAGCTACCATCAGCGCCCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
TCACTGCCCGTGGAGACAGCCCCGCAAGCAGCAAGCCAAATTTCCATTAAATTACCGAACAG
AAATTGACAAACCAATCCCAGATGCCAAGTGACCGATGTTACAGACAACAGCATTAGTGTC
AGTGGCTGCCTTCAAGGTNCCCTGGTACTCGGTTACAGANTAACCACCCTCCCAAAAATG
GACCAGGAACCAACAAAACCTTAAACTCCAGGCTCCAGATCAAAAACAGAAATGACTATTGA
ANGCTTGACGCCACACTGGGAGTATGNGGGTAGTGNCTATGCTTCAGAAATCCAAGCGGA
AAAANGTCAAGCCTTNTGGGTTCAA

16520.2.edit

TCGAGCGGGCCCGGGCAGGTCTCTCCAGCTCTGCAGTGTCTTCTTCACCATCAGGTGCA
GGGAATAGCTCATGGATTCCATCCTCAGCGCTCGAGTAGGTCACCCTGTACCTGGAAACTT
GCCCCGTGGGGCTTTCCCAAGCAATTTTGAATGGAATCGACATCCACATCAGTGAATGCCAG
TCCTTTAGGGCGATCAATGTTGGTTACTGCAAGNCTGAACCAGAGGCTGACTCTCTCCGCTT
GGATTCTGAGCATAGACACTAACACATACTCCACTGTGGGCTGCAANCCTTCAATAANNC
ATTTCTGTTTGATCTGGACC

16521.2.edit

TCGAGCGGGCCCGGGCAGGTCTCTGGGCTCTGGCACACGCACATGGGGGNGTTGNT
CTNATCCAGCTGCCCCAGCCCCCAATGGGCACTTTGAGAAGGTGTGCAGCAATGACAACAA
NACCTTCGACTCTTCTGCTGCACTTCTTTGCCACAAAGTGCACCCTGGAGGGCACCAAGAAG
GGCCACAAGCTCCACCTGGACTACATCGGGCCTTGCAAAATACATCCCCCTTGCCTGGACT
CTGAGCTGACCGAATTCCTCCCTTGGGCAATGGGGACTGGCTCAAGAACCCTCTCTGCCACCC
TTGTATGANAGGGATGAAGACACNACCC

FIG. 15YY

16522.1.edit

AGCGTGGTCCGCGGCCGAGGTCTGTCCTACAGTCCTCAGGACTCTACTCCCTCAGCAGCGTG
GTGACCGTGCCCTCCAGCAACTTCGGCACCCAGACCTACACCTGCAACGTAGATCACAAGC
CCAGCAACACCAAGGTGGACAAGAGAGTTGAGCCCAAATCTTGTGACAAAATCACAAT
GCCCACCGTGCCAGCACCTGAATCCTGGGGGGACCGTCAGTCTTCTCTCCCCCGCAT
CCCCCTTCCAACCTGCCCCGGCGGCCGCTCGAAAGCCGAATTCAGCACACTGGCGGGCCG
GTAAGTGGANCCNAACTTGGNANCCAACCTGGNGGAANTAATGGGCATAANCTGTTTC
TGGGGGGAATTTGGTATCCNGTTTACAATTCCCNACACAACATACGAGCCGGAAGCATAAA
AGNGTAAAAGCCTGGGGGNGGCCCTANTGAAGTGAAGCTAAACTCACATTAATTNGCGTTG
CCGCTCACTGGCCCCGTTTTCCAGC

16522.2.edit

TCGAGCGGGCCCGGGCAGGTTTGGAAAGGGGGATGCGGGGGAAGAGGAAGACTGACGG
TCCCCCAGGAGTTCAGGTGCTGGGCACGGTGGGCATGTGTGAGTTTTGTACAAAGATTTG
GGCTCAACTCTCTTGTCCACCTTGGTGTGCTGGGCTTGTGATCTACGTTGCAGGTGTAGGT
CTGGGNGCCGAAGTTGCTGGAGGGCACGGTCACACGCTGCTGAGGGAGTAGAGTCCTGA
GGACTGTANGACAGACCTCGGCCGNGACCACGCTAAGCCGAATTCTGCAGATATCCATCA
CACTGGCGGGCGCTCCGAGCATGCATTTAGAGC

16523.1.edit

AGCGTGGNCGCGGACGANCACAACAACCCC

16523.2.edit

TCGAGCGGGCCCGGGCAGGNCCACATCGGCAGGGTCCGAGCCCTGGCCGCCATACTCG
AACTGGAATCCATCGGTCAATGCTCTTGGCGAACCAGACATGCCTCTTGTCTTGGGGTTCTT
GCTGATGNACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACCA
GTCTCCATGTTGCAGAAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATCC
AGTACTCTCCACTCTTCCAGTCAGAGTGGCACAATCTGAGGTACCGGCAGGTGCGGGGGG
GTTCTTGACCT

16524.1.edit

AGCGTGGTCCGCGGCCGAGGTCCAGCCTGGAGATAANGGTGAAGGTGGTCCCCCGGACTT
CCAGGTATAGCTGGACCTCGTGGTAAGCCCTGGTGACAGAGGTGAAACTGGCCCTCCAGGA
CCTGCTGGTTTCCCTGGTCTCTGACACAAATGGTGAACCTGGNGGTAAAGGAGAAACA
GGGGCTCCGGNTGANAAAGGTGAAGGAGCCCTCTGNAATTGGCAGGGGCCCCANGACTT
AGAGGTGGAGCTGGCCCCCTGGCCCCGAAGGAGGAAAGGGTCTGCTGGTCTCTCTGGG
CCACCTGG

FIG. 15ZZ

16523.1.edit

TCGAGCGGCGCGCGGGCCAGGTCCACCACACCCAATTCCTTGCTGGTATCATGGCAGCCGC
CACGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCCAGAGA
AGTGGTCCCTCGGCCCCCGCCCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGGA
ACCGAATATACAATTTATGTCAATTGCCCTGAAG

16523.2.edit

AGCGTGNTCNCGGCCGAGGATGGGGAAGCTCGNCTGTCTTTTTCCTTCCAATCAGGGGCTN
NNTCTTCTGATTATTCTTCAGGGCAANGACATAAATTGTATATTCCGNTCCCGTTCCAGN
CCAGTAATAGTAGCCTCTGTGACACCAGGGCGGGCCGAGGGACCACTTCTCTGGGAGGA
GACCCAGGCTTCTCATACTTGATGATGAAGCCGGTAATCCTGGCACGTGGGCGGGTGGCAT
GATACCACCAANGAATTGGGTGTGGTGGACCTGCCCGGGCGGGCGCTCGAAAANCCGAA
TTCNTGCAAGAATATCCATCACACTTGGGCGGGCCGNTCGAACCATGCATCNTAAAAGGG
CCCCAATTTCCCCCTATTAGGNGAAGCCNCATTTAACAAATTCCACTTGG

16529.1.edit

TCGAGCGGCGCGCGGGCCAGGTCTCGCGGTGGCCTGGTGATGCTGGTCTGTGGTCCCC
CCGGCCCTCCTGGACCTCTGGTCCCCCTGGTCTCCAGCGCTGGTTTCGACTTCAGCTTC
CTGCCCCAGCCACCTCAAGAGAAGGCTCACGATGGTGGCCGCTACTACCGGGCTGATGAT
GCCAATGTGGTTCTGTACCGTGACCTCGAGGTGGACACCACCTCAAGAGCCTTGAGCCA
GCAGAATCGAAAACATTCCGAACCCAAAGAAAGGGCAAGCCCGCAAAAGAAACCCCGCCCGC
ACCTGGCCGNGAACCTCCAAGAAAGTCCCCACNTCTTGACTGGGAAAAAAGGGAAAAANT
ACTTGGAAATTGGAC

16529.2.edit

AGCGTGGTCCCGCGCGAGGTCCACATCGGCAGGGTCCGAGCCCTGGCCGCCATACTCGAA
CTGGAATCCATCGGTCAATGCTCTCGCCGAACAGACATGCCTCTTGTCCTTGGGGTTCTTGC
TGATGTACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACCAGT
CTCCAATGTTCCAGAAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATCCAG
TACTCTCCACTCTTCCAGTCAGAACTGCCACATCTTGAGGTCACGGCAGGGTGGGGCGGG
GTTCTTGGGGCTGCCCTTCTGGGCTCCCGAATGTTCTNNGAACTTGCTGC

FIG. 15BBB

16530.1.edit

AGCGTGGTCCGGCCGAGGTCCACTAGAGGTCTGTGTGCCATTGCCCAGGCAGAGTCTCTG
CGTTACAACTCCTAGGAGGGCTTGCTGTGCGGAGGGCCTGCTATGGTGTGCTGCGGTTCA
TCATGGAGAGTGGGGCCAAAGGCTGCGAGGTGTGGTGTCTGGGAACTCCGAGGACAGA
GGGCTAAATCCATGAAGTTTGTGGATGCCCTGATGATCCACAGCGGAGACCCTGTAACTA
CTACGTTGACACTTGCTTGTCGCCACGTGTTGCTCANACANGGGTGGGCTGGGCATCAAG
GNG

16530.2.edit

TCGAGCGGCCCGCCCGGGCAGGTCTGCCAAGGAGACCCTGTTATGCTGTGGGGACTGGCTG
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ATCTCATCTTTGGGTTCCACAATGCTCACGTGGTCAGGCAGGGGCTTCTTAGGGCCAATCT
TACCAGTTGGGTCCAGGGCAGCATGATCTTCACCTTGATGCCCAGCACACCCTGTCTGAG
CAACACGTGGCGCACAGCAAGTGTCAACGTAAGTAAGTTAACAGGGTCTCCGCTGTGGAT
CATCAGGCCATCCACAACTTCATGGAATTAACCCTCTGTCTCGGAG

16531.1.edit

TCGAGCGGCCCGCCCGGGCAGGTCTTTCAGAGGTTCGAAGGTCCACTGTGGAGGTCCCAGG
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GTCCAGGGTGTAGGGGCCCCAGCTCTTGATGCCATTGGCCAGTTGGCTCAGCTCCCAGTAC
AGCCGCTCTCTGTTGAGTCCAGGGCTTTGGGGTCAAGATGATGGATGCCAGATGGCATCCA
CTCCAGTGCTGCTCCATCCCTCTCGGACCTGAGAGAGGTCACTCTGCAGCCAGAGTACAG
AGGGCCAACACTCGTGTCTTTGAATA

16531.2.edit

ACCGTGGTCCGGCCGAGGTCTGTACTCGGAGCTAAGCAAACCTGACCAATGACATTGAAG
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CTCTGTGNCCACCACAGCACTCTCGGACCTCCACAGTGGATTTGAGAACCTCAGGGACT
CCATCCTCCCTCTCCAGCCCCACAATTAAGGCTGCTGGCCCTCTCCTGGTACCATTACCCCT
CAACTTCACCATCACCAACCTGCAGTATGGGGAGGACATGGGTCACCCTGNTCCAGGAA
GTTCAACACCACA

16532.1.edit

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GATAGTATGCCAGCACGGNTCTGAGNCTGTGGGATAGCTGCCATGAAGTAACCTGAAGGAG
GTGCTGGCTCGGTANGGGTTGATTACAGGGTTGGGAACAGCTCGTACACTTGGCAATCTCTG
CATATACTGGTTAGTGAGGTGAGCCTGGCCCTCTCTTTTG

FIG. 15CCC

01_16558.3.edit

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CTGCTGGTCCTG

02_16558.4.edit

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GCAGGACCAGCAGCCCCAGCTTCGCCCCGGTCACCTGTGGCTCACCTCGGCCGCGACCAGC
CT

03_16555.1.edit

TCGAGCGGTCCGCCCCGGCAGGTCCACCGGGATAGCCGGGGTCTGGCAGGAATGGGAGGC
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AGAGTGAGGAGCCTGGAGACCGANAACCGGAGGCTGGANAGCAAAAATCCGGGAGCACTT
GGAGAAGAAGGGACCCCAGGTC.AAGAGACTGGAGCCATTACTTCAAGATCATCGAGGGA
CCTGGAGG

04_16555.2.edit

AGCGNGGTCCGCGGCCGAGGTCCAGCTCTGTCTCATACTTGACTCTAAAGTCATCAGCAGCA
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GAGCCCTCAGGTCTCTGATGATCTTGAAGTAATGGCTCCAGTCTCTGACCTGGGGTCCCTT
CTTCTCCAAGTGCTCCCGCA.TTTTGGCTCTCCAGCCTCCGGTTCTCGGTCTCCAGGCTCCTCA
CTCTGTCCAGGTAAGAAGGCCCAGGCGGCTCTCAGGCTTTGCATGGTCTCCTTCTCGTTCT
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05_16556.1.edit

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GATCAGTCAGACTGGCTGTTCTCAGTTCTACCTGAGCAAGGTCAGTCTGCAGCCAGAGTA
CAGAGGGCCA.ACACTGGTGTTCTTGAACAAGGGCTTGAGCAGACCCTGCAGAACCCTCTTC
CGTGCTGTTGA.ACTTCTGGA.ACCAGGCTGTTCATGTTTTCTCATAATGCAAGGTTG
GTGATGG

FIG. 15DDD

07_16537.1.edit

AGCGTGGTCGCGGGCCGAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCGAA
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TGATGTACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACCGCAGGTCTCACCAG
TCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTGGTTGGGGTCAATCCA
GTA CTCTCCACTCTTCCAGTCAGAAGTGGGCACATCTTGAGGTCACCGGCAGGTGCCGGGC
CGGGGGTTCTTGGCGCTTGCCCTCTGGGCTCCGGATGTTCTCGATCTGCTTGGCTCAGGCTC
TTGAGGGTGGGTGTCCACCTCGAGGTCACGGTCACCGAAACCTGCCCCGGGCGGCCCGCTC
GA

08_16537.2.edit

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CCGCACCTGCCGTGACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGAT
TGACCCCAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGGT
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AGGAACCCCAAGGACAAGAGGCATTGTCTTGGTTCGGCGAGNAGCATGACCCGATGGATT
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FIG. 15EEE

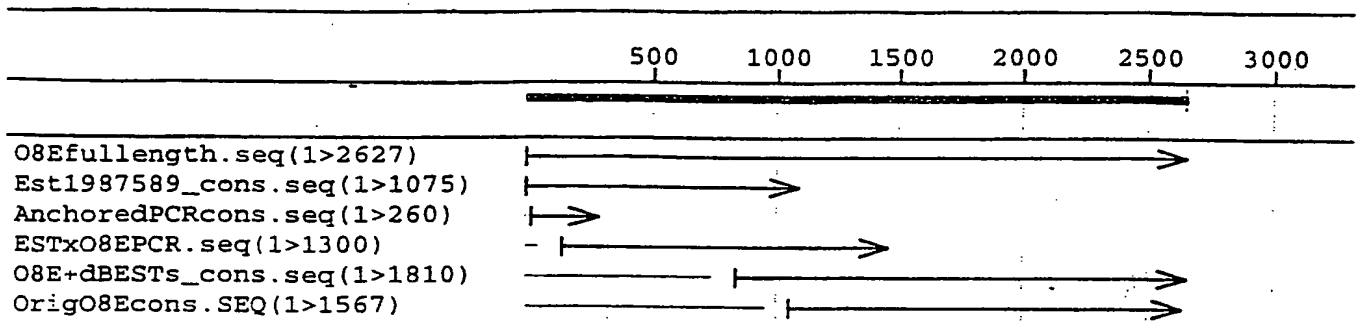


Fig. 1b

SEQUENCE LISTING

<110> Corixa Corporation

<120> COMPOSITIONS AND METHODS FOR THE THERAPY AND
DIAGNOSIS OF OVARIAN CANCER

<130> 210121.462PC

<140> PCT

<141> 1999-12-17

<160> 393

<170> FastSEQ for Windows Version 3.0

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tgatccccc gctcggcct cccaaagtgc tgggattaca ggcgtgagc accagcctcg	360
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attaactatt gtgtcagaag agatcgaata cctgcttaag aagcttacag aagctatggg	180
aggaggttgg cagcaagaa caattgaaca ttataaaatc acctttgatg acagtcaaaa	240
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gttaaagcag ggttacatga tgaannaggg ccacagacgg aaaaactgga ctgaaaggatg	420
gtttgtacaa aaacccaaca taatttctta ctatgtgagt gaggtctgga aggataagaa	480
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<211> 461

<212> DNA

<213> Homo sapien

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<212> DNA

<213> Homo sapien

<220>

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<223> n = A,T,C or G

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ttctgagagc	tttagatgag	tttttttttt	tttttttttt	tttttttttt	tttttttttt	180
gcataatctt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	240
gttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	300
gttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	360
caggttcacac	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	420
gacatctttg	tttttttttt	tttttttttt	tttttttttt	tttttttttt	tttttttttt	480
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<212> DNA

<213> Homo sapien

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<211> 531

<212> DNA

<213> Homo sapien

<400> 6

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gcaccagtgc kggactgac actctcting gctttgctt tagctctctg tccggcctgg 360
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ttctccagac cgagcccaat gccatttcca gctctaatct cggccctagc cttggcllca 480
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 <212> DNA
 <213> Homo sapien

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gcccgcaggg cttcaagggg tccataguc ttttggccc gcagggcctc aaggactcgg 180
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aagctctccc gtaggctgc caagctccag tcatcccaq agcctgaagc nccaccact 300
cgggatgtgg cctttttgca agggagggca atgatllgg tgaagtacat tttgctaaa 360
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<210> H
 <211> 531
 <212> DNA
 <213> Homo sapien

<220>
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 <222> (1)... (531)
 <223> n = A, T, C or G

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cactcaggaa gaatttttcc tcttcaagc agtgaaggcl tccagagta tagtaccat 180
attgottgac tgggggtgac taaaaattt cttgcayaa ggttaggatg ggtanagaat 240
tagattttct gaatgcayay atannatgtg aactcargaa ctttaggtac tacatattca 300
taaaatcatt attcacatat ttctgattt atccagaaa lcatgtatga aatgctttga 360
gtttcttga gtaactcra ttactcctcc caagaacaa tattataagt atccctgata 420
ataagaacaa caggacllq tcatatctt cggalaagag aatagllctc tgggtgtttg 480
ntcttaattt atannattt cttgcacat lcttagtcca gactcaca a 531

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<210> 9
 <211> 531
 <212> DNA
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 <223> n = A, T, C or G

<400> 9

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ggggaacaga	ccagcaacgc	tctgtgaccl	gtttgttaca	ggtccatgat	gagghaanna	180
atcacctgag	tataagggtt	ggtttaqaaa	ctcttaccgc	gatttgacaa	agtaatcttc	240
tgtgcagtga	atclaaqaaa	aaatttgggg	ctglatttgt	atgttctttt	ttttcatttc	300
atgttctgag	ttacctatit	ttattgcatt	ttacaaaagc	atcttcccat	gaaggacagc	360
aagttaaaaa	caaagcaggt	cctttatcac	agcactgtag	tagaacacag	ttcaagattt	420
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<212> DNA

<213> Homo sapien

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cgtatagana	gtctctctg	atgaactttt	gatgaagcl	tcacacacag	tgttttattg	540
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ttatgatten	gcagcttctg	caattgatta	gaacaaclaa	caattgtttc	ttcaattgtg	780
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<211> 541

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gaantccag	tgagaaaaat	atgtctcttc	caagcclclg	actcccccga	aaacttttgc	540
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<211> 541

<212> DNA

<213> Homo sapien

<400> 12

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<400> 16

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gtcctgccc	ccacccccc	aggcccaag	ctgtctctg	tcagagccag	ccctgactcc	600
tgctagccct	aagtgtccc	aagcccaagt	ggctagggcg	ctcagggcaa	ccgttcccag	660
tctgcctac	ttctcttacc	tttaccctcc	atacctccaa	agtagaccc	gttcatgagg	720
tcacaggc						728

<210> 17

<211> 531

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(531)

<223> n = A,T,C or G

<400> 17

nagcagaggaa	gccactggcg	ctccclggctg	aaagcgggct	ccaggctcgg	gcacagaggc	60
aacgcgaaga	acaggggctg	aggtgcagcg	ctgaaaggga	caagtcactg	cgagaggagc	120
agctgggctg	ggaggctgaa	gcccgggctg	aacgtgaggc	tcaggccggc	agacggggcg	180
agcaggaggc	tcagagagaag	gcgcaggctg	agcaggagga	gcaggagcga	ctgcagaggg	240
agaagaggga	agccgggggc	ccgtcccggg	aagagctga	gcgcaggcgc	caggagggcg	300
aaaagccllc	tcaggaggng	gaacaggaga	gaaagagcgc	aaagagggcg	ctggaggaga	360
tactgaagag	gactcggaaa	tcagaagccg	ccgaacccaa	gagcaggat	gcacagggcg	420
ccgcagctaa	caattccggc	ccagacactt	gtgaaagctg	tagagactcg	gacctctggg	480
cttcagaaa	ggattclalc	gcaggaaggc	aggagctcgg	ccccccagg	a	531

<210> 18

<211> 1041

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(1041)

<223> n = A,T,C or G

<400> 18

ctctgtggga	aaatgatnag	gaatgaattt	accat.laccc	atgttctcat	ccccaaagcaa	60
agtgtgggt	ctgattactg	caaacacagag	aacgungag	aaatttttct	catcacaggat	120
cagcagggcc	tcatcacac	gggtgggtt	catactcacc	ccccacagac	cgogttttct	180
tccagtgttg	acctacacac	tcaatgcctt	taccagutga	tggtgcacga	gtcagttagcc	240
attgtttgt	cccccaagtt	ccaggaact	ggattcttta	aaataactga	ccatggacta	300
gaggagattt	cttctgttg	ccagaaagga	tlcatccac	ccagcaagga	tccacctctg	360
llctgtagct	gcagccacgt	gactgttg	gacagagug	tgaccatcac	agaccttcga	420
tgagcgtttg	agtcacacac	cttccagaa	caacaaacc	atatcagtgt	actgtagccc	480
cttaatttaa	gttctctaga	agcttttga	gttttttga	gtatagtagaa	aggggggcat	540
caactgagaa	agagctgatt	ttgtatttca	ggtttgaaa	gaataactg	aacatatttt	600
ttaggcaggt	cagaaagaga	aatgtgtcac	ccaaagcaa	ctgtacatca	gaatttaagt	660
tactcagaaa	ttaagttagct	cagaaattaa	gaaagaatgg	tataatgaac	ccccatatac	720
cttctcttct	ggattcacca	attgttaaca	tttttttct	ctcagctatc	cttctaattt	780
ctctctaat	tcaatttgtt	tatat.lccc	tctgggctca	ataagggcat	ctgtgcagaa	840
atttggaaagc	catcttagaaa	atcttttga	tttctctgtg	gtttatggca	atatgaatgg	900
agcttattac	tatgtgtgag	gacagcttac	tccatttgac	cagatttttt	ggctaaccac	960
ccccgaagaa	tgtttttgtc	aggaattatt	gttatttaal	aatatttca	ggatattttt	1020
ccctacacat	aaagtaacaa	t				1041

<210> 19

<211> 1043

<212> DNA

<213> Homo sapien

<400> 19

ctctgtggga	aaatgatnag	gaatgaattt	accat.laccc	atgttctcat	ccccaaagcaa	60
agtgtgggt	ctgattactg	caaacacagag	aacgungag	aaatttttct	catcacaggat	120
cagcagggcc	tcatcacac	gggtgggtt	catactcacc	ccccacagac	cgogttttct	180
tccagtgttg	acctacacac	tcaatgcctt	taccagutga	tggtgcacga	gtcagttagcc	240
attgtttgt	cccccaagtt	ccaggaact	ggattcttta	aaataactga	ccatggacta	300
gaggagattt	cttctgttg	ccagaaagga	tlcatccac	ccagcaagga	tccacctctg	360
llctgtagct	gcagccacgt	gactgttg	gacagagug	tgaccatcac	agaccttcga	420
tgagcgtttg	agtcacacac	cttccagaa	caacaaacc	atatcagtgt	actgtagccc	480
cttaatttaa	gttctctaga	agcttttga	gttttttga	gtatagtagaa	aggggggcat	540
caactgagaa	agagctgatt	ttgtatttca	ggtttgaaa	gaataactg	aacatatttt	600
ttaggcaggt	cagaaagaga	aatgtgtcac	ccaaagcaa	ctgtacatca	gaatttaagt	660
tactcagaaa	ttaagttagct	cagaaattaa	gaaagaatgg	tataatgaac	ccccatatac	720
cttctcttct	ggattcacca	attgttaaca	tttttttct	ctcagctatc	cttctaattt	780
ctctctaat	tcaatttgtt	tatat.lccc	tctgggctca	ataagggcat	ctgtgcagaa	840
atttggaaagc	catcttagaaa	atcttttga	tttctctgtg	gtttatggca	atatgaatgg	900
agcttattac	tgtgtgtgag	gacagcttac	tccatttgac	cagatttttt	ggctaaccac	960
ccccgaagaa	tgtttttgtc	aggaattatt	gttatttaal	aatatttca	ggatattttt	1020
ccctacacat	aaagtaacaa	t				1043

<210> 20

<211> 448

<212> DNA

<213> Homo sapien

<400> 20

ggacgacaag	gccatggcga	tatcggatcc	gaattcaagc	ctttggaatt	aatnaacct	60
ggaacaggga	aggtgaaagt	tggagtga	tgcttccat	atctatacct	ttgtgcacag	120
tgaatggga	actgttttgg	ttagggcat	cttagggtt	attgtatgaa	aaagcagac	180

ggaactggta	ggaggtcaag	tgggyungtt	ggtgaatgtg	gaataactta	octttgkgt	240
coacttaaac	cagatgtgtt	ycagctttcc	tgaatgcaa	ggahctactt	taattccaca	300
ctctacttaa	taaatggaat	aaaagggaat	gttttggcan	ctgatataat	ctgccaggct	360
atgtgaragt	aggaagggaat	ggtttccpet	aacaagccca	atgcaatggt	ctgaatttcl	420
aaattatcla	alaaatqaa	ctattazc				448

<210> 21

<211> 411

<212> DNA

<213> Homo sapien

<400> 21

ggcagtqaca	ltaacnataa	lgygaaccac	cttcccttth	cttcaggatt	ctctgtagt	60
gaagagagca	cccagtgttg	ggctgaaaac	atctgaaagt	agggagagga	acctaaata	120
atcagtatct	cagagggtct	taaggtgcca	agaagtctca	ctggaccttt	aagtgcacac	180
aaaggaalac	ltaagggaatc	gccaagtcac	naotttctaa	ctctgtctcc	tblaaggagc	240
aaagtgaact	caagagtcta	cttctttagt	ggcaactara	gaaaactcgt	gttccccaga	300
aaaacaggag	caattagaaa	tggttccaat	atttcxango	tcgcacaaac	ggatgtgctt	360
tcctatgccc	atttaggggt	tcttctcttt	ttttctcttt	tattacccac	t	411

<210> 22

<211> 896

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(896)

<223> n - A,T,C or G

<400> 22

tgcgtgaaa	acaacggcct	octttactgt	taaaatqong	ccacaggtgc	llagucgttg	60
gcattctaac	caccagcctc	tgtggggggc	agutrggggt	ccctgtgggc	ctctgggccc	120
acgtccagac	lclqtactcl	gctllccutt	cttcagacgt	gllccaggca	tcctrggtca	180
cttngtaact	ggcgtgggac	tcctgtgtgt	ctccagcagc	tcctccaggn	ggtcgggccc	240
cttcaccgca	gcctcatgtt	gtgtccggag	gclqntcaag	gcctctctcl	tcctcgcagc	300
ggctgtctcl	acctccaggn	gtacclagat	cagctccagc	tcclqngggg	cctgcagcgt	360
ggccagctcg	gccttggcct	gcgcggtctc	ctctccaxaq	gotgcagcc	ggctctcgaa	420
ctcttggggg	atcacctggg	ccaggttgc	gcgttcgcta	gaaagtgccl	ttttccccc	480
ctgcgcctac	lccagagccc	gtcccllclq	ccgcacaagg	ccclqngagc	gcagattctc	540
gcctctggcc	tcctccagct	ggcccttcag	ctccagcccl	ngctctcgaa	gcttcagctc	600
cgaatgctcc	agctcggaga	gtctggcctc	gtacttqtec	cgtaagcgtc	tgagcagggc	660
ctgggcagcc	ttctactctc	ctctcttggc	cagcgcctat	tcggccccc	gagggtraat	720
gacragctac	alclacttcl	ccgggccllt	ccggatttct	tcclccagct	ctgttcccg	780
gtlccagcgc	ccagcctctc	cttccctggt	ggggccggcc	tcctccagct	gcctctccag	840
ctccagctac	tcctccaggc	tattccagctc	catctggcgg	ngctgcagcg	tgcca	896

<210> 23

<211> 111

<212> DNA

<213> Homo sapien

<400> 23

caacttatta	ctlgaactla	taatatagcc	lgtccgtttg	ctgtttccag	gclglgatat	60
attttccag	tggtttgact	ttaaaaataa	ataaggttta	attttccccc		111

<210> 24
 <211> 531
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1)...(531)
 <223> n = A, T, C or G

<400> 24
 tgcagatcac gggagtttat ttatttaatt tttttcccca galgagagact ctgtcgccca 60
 ggctggagtg caatgggtgtg atcttggcctt actgcaacat ccacotcttg ggttcaagag 120
 attctctctgc cacagcctcc ccaglcagctg ggattacagg tgcccgccac cccatccagc 180
 taatttttat ttctctagtc aagacagggg ttccttatgt tggccaggcc ggtcttgaac 240
 ttctgaacct aggtgntcca cctgcctcgg ccltcccaag tgttggggtt acaggcgtga 300
 gctacccttg cctggccagc cactggagtt launggacag tcahgtttgg tccagcctaa 360
 gggggccttt tccccatca gaaagccttg ggctcctgta cctcnaasta gggcctctgt 420
 aagtcagtc atgtgagctt ctgctctaac tggccacctg gggcatttgg cctctgagac 480
 agccttgcca ggagcctgc atctgcaaaa gaaaggtta cttcctttcc g 531

<210> 25
 <211> 471
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1)...(471)
 <223> n = A, T, C or G

<400> 25
 cagagaatct kagaaagatg tggcgttttc ttttaactgaa tgagagaagc ccatttgtat 60
 ccttgaatca ttgagaaaag gggcggttgg cgaacggcgc gacctaggga tggatcttgg 120
 tggacttggg gaggctgcaq anacctctag ctgagcgctg aggaacctcc cggcgggarg 180
 cctggggagc agatggaccc tactggaggt cagtlggatt cagatttctc tcagcaagat 240
 actcttggc agataattga agattctcay cctgaaagcc aggttcttga ggttgaattc 300
 gtttctcact tcaatatact atctcgccac ctctctaacc tccagagcca caaagannaat 360
 cctgtgttgg atgttgngtc caatccttga acaaacagct ggggnagaa caggagaccg 420
 gtaatagtgg gttcaatgaa cttttgaag aaagcctggt tgcagacct g 471

<210> 26
 <211> 541
 <212> DNA
 <213> Homo sapien

<400> 26
 gactgtcctg aacaaggagc ccttgaccag agagctgagc gagatgcaga gtggctggcag 60
 gagtggagac caaagaacac ccaccttctt ccttctgagc agtagagcaa ccctcagaag 120
 atactgtttt attgctcttg tcaaaccaag ctctctgagt tgacaasacc tcaagctctg 180
 gtgactcttg aatctcagct ccactttcca taagttcttg tgcagacaa tglctctctg 240
 ctctcctagc agcaacagat gcttgggggc taaaaggcat gtcctctgac cttgcaggtg 300
 gtggattttg ctcttttaca acatctacat ccttactagg ctgtgtctgt acagggatgt 360
 ccttgctgga ctgtctgtct atggggatct ctctgttggc ctgttcttca tgccttaattg 420

```

cagtattagc atccacatca gacagcctgg tacaaccaga gttgggtggtl notgatlgta 480
gtcgtctcttt gtcacattca catggccaca gtatttttct caacatctcg gctclngggaa 540
g 541

```

```

<210> 27
<211> 461
<212> DNA
<213> Homo sapien

<220>
<221> misc feature
<222> (1) ... (461)
<223> n = A, T, C or G

```

```

<400> 27
gaaatgtata tttatcatt ctcttgaaag atcagaackc taaatcagb tttotataac 60
arcatgtaat acagtcaccg tggctcagag gtccaggag gcaagtggfta acacatgaag 120
aglggggggg ggggggttggg aacaaagtat tcttlctctt caaagcttca tctctcaggg 180
ctcaatttca agcagtcatt gtctttgctt tcaaaagtct gltgtgtgctt calqgaaggt 240
atatgtttgt tgccttaatt tgaattgttg ccagggaagg hotggagatc laatttcaga 300
gtaagaaaaa ctgagctaga actcaggcat ttctctlara gaacttggcl tccagggtag 360
aatgaanpaa aaqaacatta qanctcaac aagclqanga taatcccttc aggcatttcc 420
cataggccctt gcaactctgt tcactgagag atgtttatct g 461

```

```

<210> 28
<211> 541
<212> DNA
<213> Homo sapien

```

```

<400> 28
agtctggaqt nageannaca gagcaagaaa caarragaag ccasaagcag naqgcoccaa 60
tatgaacaag ataatcttat ctccaagac atattagaag lltgggaaat aattcagtgc 120
aactagacaa gtgtgttaag aglgclaaat caaatgcag tggagacaag tgcclcccc 180
galclaaagg aactcctctt nctgtctccc tggggagtga gaggacagga tctgtcctgt 240
tctttgtctc tgaattttta gttatacttg clgkctgtgt gctclnggga agccctcgga 300
nagtctatcc caacatctcc acatcttata ctccacaaat laagctgtag tatgtacct 360
aagaagctgc taallgaclg caacllmgca actcaggggc ggcctgcattt laqkcttggg 420
tcaacttctt cactttttat natgcttccc aagggtgctt ggcctclclt cccaactgac 480
aatgccccaa gttgagaaaa atgatcataa llttngcata aacccagcaa tggcgacccc 540
c 541

```

```

<210> 29
<211> 411
<212> DNA
<213> Homo sapien

```

```

<400> 29
taagtgtctt cctcactctt atggcaatga ccccacatct laattggatta agataatgaa 60
agtgtatttc ttacactctg tatctatcaa nagaagctga ngtgatagcc cgccllghcat 120
tgtcatccat attctgggac ltagggcggga actttcttga atattgccag ggaacatggc 180
agaggggcaa agtgcattct gggggaatgc acaktggctc agcctgggtc atgagtgate 240
laatttact ctgttcacaa ctcaattgcc agcaccagtc acaaggcccc accaaatacc 300
agagcccaag aaatgtagtc ctgttgatal ggttttgttg tttcccaacc caatctctct 360
cttgaattgt aagctcccal aattcccalg tgttghngga gggacctggt g 411

```

<210> 30
 <211> 511
 <212> DNA
 <213> Homo sapien

<400> 30
 atcatgagga tgttaccaaa gggatgggac taaaccattt gtatttgttt gttttacac 60
 tgccttgaag atactacctg agatttggtt atttataaac aagagagatt taattgactc 120
 acagttctgc atggctggaq uggcttcagg aaacttacag tcatggtgga aggcacagga 180
 qtagcaaggtt atgtcttaca tgtcagtagg aqatgagagc agagcaggag aacctgccc 240
 ttataaacca ttcatatctc ataacttctt atcatgagaa uaccatggag gaaacacccc 300
 tcaagatcna atcaacctcc ugcaggtccc tccctcagca cgtggggatt ataattcagg 360
 attagagggg cccagagaca aaccatatca tccctcatga gaalccccc ctcataglcc 420
 aatcagctcc taccaggccc cacctcnaac actggggatt gaaattcaac atgagatttg 480
 gatggggaca cagattcaaa ccatatcata c 511

<210> 31
 <211> 827
 <212> DNA
 <213> Homo sapien

<400> 31
 catggccttt ctccttagag ugcagaggtg ctgccctggc tgggagggaa gctccaggca 60
 cluccagctt tcttatttt cccgtttggt ccatgttgaq agctaccacg agccccagcc 120
 tcacagtgtc cactcaaggg cagcttgggt clcttgtctt gcagaggcag uctggtgtga 180
 cccggggaa ttgacccggg ugcacacagt ggccttagag gattgttggc tggccctca 240
 acctagtgtc cgtctctc tcctctggag ccagttctga gtttaaggc attaatgttt 300
 agatacaagc tcttctggc tggaaaaaca cccctctgt gataaagctc agggggcact 360
 gaggaagcag aggccttctt ggggtgcctt cctgaagaga ggttcaggcc atcagctctg 420
 tccccctggt gctccacgt ctgttctca cctcctct ctgggagcag ctgcactga 480
 ctggccacgc gggggcagtg gaggcacagc clcagggttg ccgggctacc tggcctctc 540
 tggcctacaa agtagaggtt gctcagtttc cttccacctg agggcagacc tctgacctct 600
 accagttctc ctggccctgc cactcatctg ggtggcttgc tctcagaaa ggcggggcat 660
 gctttctaaa caccagcaca ggaggtttgt agggcatct ccaggtgggg aacagttct 720
 agataagtaa ggtgacttgc claaagcctc ccagcactct tgacttctga gttctcagcc 780
 agcttcatg tcnccactg gaaccgaaaa catgctctaa tatnaa 827

<210> 32
 <211> 291
 <212> DNA
 <213> Homo sapien

<400> 32
 ccagagcttc cttctctttg gagaatgggg aggcctcttg gggacacaga gggtttccac 60
 ttgatgacc tctagagaaa ttgcccaga agctccctt ctggtcccaa cctgcagacc 120
 ccacagcagt cagttggta ggccttcttg taagaggtca cttggctcca ttgctgttt 180
 ccaaccaatg ggcaggagag aaggccttta ttctctgccc acccattctc clgttcaggc 240
 acctcagttt lcaatcaggg ttgtcagca acggtacctt ttaacaggtc a 291

<210> 33
 <211> 491
 <212> DNA
 <213> Homo sapien

<400> 33

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tgcattgagt tttatttatg cgtttttagl: tggaaaacaa agtgtcccag cagcatgact      60
gaacatcact cacttcccct atttgatata caagggcuno gccgagagac: cagaccagga      120
llcnaaaccn: actgcacagc: atatttggg atcncgtgtc aggtcagtgt ccgtcacctg:      180
cccaracgct gttacgttgc acatgactgt aungtgcac: glaacagcac tgtttttt:      240
tcccatgaac agttaoctgc catgtatata catgattcag: aacattttga accgttaatt      300
ctgcaccklg aataatccc lcvvaanccg taaaatcact ttgatgttlg taacgacac      360
atagcatcac tttaacnccag aatcatctgg aaaaacagaa caacgatatc atacatctla      420
aaaaatgctg gggtagggca ggcacagctt: cagcctgla atccnagac tttgggaggg      480
ttaagcgggl. n

```

<210> 34
 <211> 521
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc feature
 <222> (1)...(521)
 <223> n = A,T,C or G

```

<400> 34
tgggtgggaa agaaagccaag gccaaagggc: lurtggggca gctgcagclg gagggaaggg      60
agcagaggaa gcagagttag cggccaggtg tgtggggcc: gccagatcac cttaacttgc      120
tggatggaaa tgaaaattac ccgtgtcttg tggatgcaga ccgtgatgtg atttcccttc      180
ccccaalaa: caacagtgag aagacaaagg tlaagcaaac gactcttgat ttgttttllg      240
aagtaacaag tgcacacag: ctgcagatlt qcaaggatgt catggalgc: ctcatctctg      300
aatggcaag aatgaaaaa gtacacttta gaaaataaay aggaaggatc actccagat      360
actgaagcag atgcagtctc tggacaactt ctagclccc: caacgaater cagtgtctga      420
aaggncgggc ccllclclct ggttgggtgaa caagtccgg tgggtgater tgggaaggaa      480
cctgaangtg gtgtacccc: tccaaaggcc: accttgcca c

```

<210> 35
 <211> 161
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(161)
 <223> n = A,T,C or G

```

<400> 35
tcccgctctc agaggggccc: tgcacactgc ngtccggccc gctcctctgc tcccccgcg      60
cgcgcgctg ccgacgryca qcatqstgac ngaggtgggc tgcacgcag: tgcacclgc:      120
gccgcgcgcg ctgctgcgcg tgcctgcgct gctgctgctg c

```

<210> 36
 <211> 343
 <212> DNA
 <213> Homo sapien

```

<400> 36
ggcgggtany cctggaactg agaagaacga agangctttc agactacgtg gggagaagatg      60
aaaaaaccaa aattatcgcc agatllcagc aaaggggaca gggagctcca gacccagagat:      120
ctattattag cagcagaggag ccgaagcagc tgaicclgla clalclmagg: agacaagagg      180

```

```

agctcaggag attggaagaa atqatgatg atgactatct gaactcaccn tgggaggaa 240
acactgcttt gaaaagacat ttcatggag tgaagagat aaagtggaga ccaagctgaa 300
gttcaccagc tgaatgacat cccaaaggag ttagctcacc t 341

```

```

<210> 37
<211> 521
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(521)
<223> n = A,T,C or G

```

```

<400> 37
telgagaggtt aactgtttca totaaatagg gataatgrta aacacotata gcatagagtt 60
gtttgagatt aaatgagata atacatgkka gattatgkga ctggcatana gcaagattgt 120
tgttgttgtt gatgatgatg alqatgatga taataktttt ctatccccag tgcacaaclg 180
cttgaaclla ttagatante aatcaatgtt tcttgaactg agatcaatct ccccatggtg 240
telggtatgt aaagccctac attttcttcl wjaggagatg acatitgagc aagutcttaa 300
wqaaatocag atgacttcaac ctgacacckg cttggtgair coattggcaat tttatcatct 360
ctccatttagc tctcaclclla ccaagccctc attalkgtat gtgctgcllt ctgaagcttg 420
cagclgggta ccatcmggca gaataaaaat catcttttca taamatagtg accctclcll 480
lctatttgca ttcccaaaag ccaagcaucg tgggaggcla 521

```

```

<210> 38
<211> 461
<212> DNA
<213> Homo sapien

```

```

<400> 38
tatganyaaq qaaagagag ataatgtgtg aaagaaatgg gtcnuyttac tagtctttga 60
aagaggttcag totgtagctc ttctaaakga aaataggagag ctttcagttg ctccaggtca 120
gatttcotta gttgtgtatc taalwamngg aaacatctgt ggttccctcc aglclclttc 180
tgggggaactt gggcccaacl ctcatctcat ttaallwngg gaatatagaa tcaungtaca 240
atttactglll gtttaacant gccacaaaga calngtttggg agclatttct tgaattgtgt 300
aantgtgtgt ttttgtgtgc tcataatgcl tccaaaaatl nggtgtgtgg caaayagaga 360
tactgttaca gaagccagca wqagaccto tgttcalton caccclccgg gatatcagga 420
attgaactca gbtgtgtcaa atccagtttg gcatatcttc t 461

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<210> 39
<211> 769
<212> DNA
<213> Homo sapien

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<400> 39
tgagggaactg attggttclg lclclgtctat tcaattcccc aagcccacll gttcctgag 60
cgtctctctt clccttccct ttagtgttac cclctcttcc atctggagcc ttctcttctt 120
gatghuagct tttcttcttc ttgttttttc tgatgttctg ctccagcatgt tctgggkgl 180
tctcatctgc atcattcccl lcaagclctg tagcttcttc ctctcttcll lqntctctt 240
tctttttctt lcttttggag ggttctctct ctgactgagc ttgaggggca ccagggtctc 300
ggcctttgag wqagccagc aagccctgct wtgggpcctc taggagagca agcttggact 360
tcattgkgt cccaagacgg gcagccttgi ntgtgttctg cccctcagag gcttggagca 420
gcclclctc agtcagaate tttggggach tggacccclg gttgtgtcta tcactgagc 480
tctccagtc tttgtttggc ttctctccac ctgaagkcaa tctagccatc ttcaaaact 540

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tcvqatcacag	caagttgggc	ttgggatgat	tataacgggt	ggctctcotta	ganaggctcc	600
ttatctgtac	tcacatctgc	ccagtttcca	ctaccaagtt	ggccgcagtc	ctgttgaaga	660
gctcattcca	ccagtggttt	gtgaactccl	tggcagggc	atgtctctac	ccatgagtg	720
cttgcttcag	ygtcacccctg	agagcctgng	tgataaccatt	ctccttccg		769

<210> 40

<211> 292

<212> DNA

<213> Homo sapien

<400> 40

gaccccatga	ataaactcct	agaggacaaa	actaacacca	atagagtgta	gtctaglkaa	60
aaactcgaaa	aatgagcaag	tctggtggga	gtggagggaag	ggctatacta	taattccaag	120
tgggcctcct	gactttaaca	agccatgntc	attatacaca	tctctgaact	ggccatacca	180
ccctlkangca	ggaaacaggg	cttgggacct	ctaagggaag	ttaacatgca	ccacccacat	240
ctaacctacc	tgcctgggtg	gtaccatccc	tgcctcctg	aaatcagtc	tc	292

<210> 41

<211> 406

<212> DNA

<213> Homo sapien

<400> 41

ttggaattaa	ataaacctgg	aacaggggag	gtggaagtg	gagcgggatg	tcctccatat	60
ctataaccltt	qlgcacagll	gagcggganc	tgtttgggll	tgggcctct	tagagllgll	120
tgatggaaan	agcagacagg	aactggtggg	agglccagtg	gggaagttgg	lgnatgtgga	180
ataacttacc	tttgtgtctc	acttaaccca	ggtgtgttgc	agcttccctg	ccatgcaagg	240
atctacttta	attccacaccl	clclclkaata	aatigaataa	aggggaatgt	tttggcaact	300
gctataatct	gcccggctat	gtgacagtag	gaaggaatgg	tttcccttaa	caagctccal	360
gcactggctc	gactttataa	attatttaat	aaatgcaact	attatc		406

<210> 42

<211> 381

<212> DNA

<213> Homo sapien

<400> 42

aaactggacc	tgccanaggg	aaatgaattt	actgcarggl	clgagcagc	tcagccctc	60
lacctcaggg	ccccacagcc	atgactaact	ccccagggg	ggggagggtg	aagggggcct	120
gtctctgcaa	gtggagccag	agtggaggaa	tgagclntga	agacaagca	ccccgccllc	180
tgcacccagc	caagccitaa	ctgcctgcct	gacccctgac	cagaaaccag	clgagctgac	240
ccctcaaggg	acaggaagcc	tgggggaggg	agtttacaa	ccaaagccct	ccacccctc	300
ccctgtctgg	gagcctgaga	cactgaagctg	ctaacaatl	ggggaggggg	aaggaagaaa	360
actctgaaa	caaatcttg	t				381

<210> 43

<211> 451

<212> DNA

<213> Homo sapien

<400> 43

calgagtttc	accactgttg	gacaggctgg	tctcgaaetc	ctggcctcaa	gcaatccacc	60
ggcctcagcc	tccaaaagtg	ctgggattac	agctatgagc	catggcacca	tgccaaaagg	120
ctatatctct	ggctctgtgt	tcccgagact	gcttttaate	ccaaattctc	tacatttagc	180
ttaaaaaata	ctttattcat	ggtcaatctg	gacataatt	actgcattct	aaglttctac	240

tgatgtatat	agaaggctaa	aggacacnatt	ttttatcaaat	ctaghtagagt	aaccacacacat	300
aaacttcatta	attactttca	acttaataaac	taatttgacal	tcctcaaaaag	agctgttttct	350
aatectgato	qnttcctttat	tttttcaaaa	tatatthgoc	atgggatgcl	aatttgcaat	420
aaggcgcata	atgagaatac	cccaaacctgg	a			451

<210> 44

<211> 521

<212> DNA

<213> Homo sapien

<400> 44

gttggacccc	ccgggacchq	aaagacactt	cttgcacagag	ctglggccgg	agaagctgat	60
gttctttttt	attatgcttc	tggatccgaa	ttgatgaga	tggttggtgg	tgtgggagcc	120
agccghatca	gaatcttttt	taggggaagca	agggcgaaag	ctccttggtg	tatatttatt	180
gatgaattta	atllctgttgg	tggggaagaga	attgaatctc	caatgcacac	atattcaagg	240
cagaccataa	atcnaacttt	tctggaatg	galggtttta	aacccacatg	aggagttatc	300
ataataggag	ccacaaactt	cccagaggca	ttagataatg	ccctaatacc	gtcctggkcg	360
lcttgacatg	caagttacag	ttccaaagcc	agatgtaaa	ngtcgaacag	aaaltttga	420
atgggtatct	atataactaa	agtttgatca	atcccgctga	tcacagaact	atagcctoga	480
ggtaactggg	gcttttccgg	aagcagagtt	gagagaactc	t		521

<210> 45

<211> 585

<212> DNA

<213> Homo sapien

<400> 45

gectacacac	lccagaaaga	ghclacactg	caactggctg	tcagtctcag	aggtgggatg	60
cagatctctg	tgaagaccc	gaactgtaag	annatcactc	togaagtggc	gcccaggtgac	120
accatygaga	acgtcaaagc	aaagatccac	qacaaggag	gcllyactcc	tgcacagcag	180
aggttcatcl	ctggccggaa	qacagctgaa	gatggdcgca	ccctgtctga	ctaccacatc	240
cagaaagagt	cyacccctga	cctgggtgct	cgclccagag	gtgggatgca	ratclccgtg	300
aagacccctg	ctggtaagac	catcaccttc	gaggtggagc	ccagtgcac	ratccqqaat	360
gtcaagggca	agatccaaga	taaggaaggg	atccctcccg	atccagagag	gttgactctt	420
qctggqaaac	agclggaaag	tggaaggaac	ctgtctgacl	acacacatcc	gaaagagtc	480
actctgcaat	tggctctgca	cttgaggggg	gggtgclhang	tttccctttt	taaggtttcc	540
acaaatttca	tigcactttc	ctttcaataa	aghtgttgca	ttccc		585

<210> 46

<211> 481

<212> DNA

<213> Homo sapien

<400> 46

gaactggggc	ctgagcccaa	gtcatgcttt	glgthccgat	ctgccgtgic	acchclgthc	60
ctgcccctca	ccctcccttc	ctggtcttct	gagccagcac	catclctaac	tagectattc	120
cttctctgca	atcacacaca	catgcggggc	acacataccc	gntgcccctg	agatggggaa	180
qtanqaqqa	lqatagagq	ttcctacatt	gtacagaaq	nggggcaggt	gcagataaaa	240
gcagcagacc	cagcggcagc	tgaggtgcat	gggynacqgt	tggggccggc	attcgggctg	300
gcacctgatg	ggcttcctct	cgtgaatcct	cagggcagcg	ccacagcaga	ggagtttaagt	360
ggtaacttgg	cagagcagag	caggagactg	aggttcagag	tnagagctaa	gctgcccctg	420
aaatcttcaa	tcttgccctg	ttccctgtat	gaagccccc	tcctgcccct	acaattctcg	480
a						481

<210> 47

<210> 461
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {}...{461}
 <223> n = A,T,C or G

<400> 47

atgaatctctc	ctttgcccac	caggtttggag	tgcagtgtct	caatctttggc	tcactgcagc	60
cttaacctcc	caggttcaag	ctatctctct	gccaaagcct	tcacatagc	tgggactaca	120
ggtaacacgc	caccacacac	cgctaaatt	ttctatttt	ttgtagagac	gggatctcgc	180
cacgtttgccc	aggtgtgtcc	catctgacc	tcnagcagat	ckqucaccct	cagcccccca	240
acgtgttagg	attacaggcg	tgaacacacg	cacccagcct	ttgtttttgt	tttaattggaa	300
tcaccagttc	cactcagtg	ctcagcagca	gtcttgagaa	atgttttgca	tctgtgacct	360
ttatgacggg	gaacttccat	gctgaatgag	ggtaggatta	catgctctct	ttccccggg	420
gtcangaaag	cctcagacac	cagcatgata	ttcaggggtga	g		461

<210> 48
 <211> 571
 <212> DNA
 <213> Homo sapien

<400> 48

ataggggctt	taaggngggg	attcaggttc	aalgaaggtc	taaggccagc	gctcttatcc	60
agcaagactg	gggtccttag	atgagaagga	gacacccgag	gctctctct	ctgcccgtct	120
aggatgcac	aagaagggcg	cctctctgca	gggaagga	gacccgacca	gaaaccgaca	180
ccttcacac	ggactttgag	cctctagaac	tgagaagata	actgtctgt	ggllagggcc	240
ccagttttg	agtattctct	taaggtcttc	taagcagact	acaaaacaaa	cagcccaaat	300
taactgatgt	cttctgtct	ttctgtaaaa	attgctatga	gagaaatttt	cactcaactgt	360
tttgagttt	ctccacacac	cctctgttt	ttctctctac	ataatcccaa	tttcaattta	420
tagtccacag	ccccgagcga	gtcattcacc	acggcctctc	ctgagctaaa	ccagcagctg	480
ctctctctac	ttcttgactg	gctgtctcacc	alcagccctc	ttgcagagat	ttcattttct	540
ccgtgcccag	gtacttcacg	cacccaagctc	n			571

<210> 49
 <211> 511
 <212> DNA
 <213> Homo sapien

<400> 49

gataaatgaa	gttgttttat	ttagcttggc	cacaaaggca	taactctctc	ttttcttaca	60
caacaaatat	ccccaaaala	ggcgaagcat	atatactctg	aatgtgtaac	aatccagctg	120
taaacagagc	cagttcttta	aaagaaaaaa	aaataktat	ttctgtcagg	tttaaatgag	180
actcaanncc	atttactctg	ctaaactcatt	attttttgct	ttcttttttg	tttaagagagg	240
caatgcata	cactgaaaaa	ggllctctac	ttatctggca	ttggaattag	acatatccaa	300
acccagccc	ccallctccc	actttaagac	cacaaaacag	taatttactt	ttctgacact	360
tggllcttct	tggaataatg	gaattataaa	alaagctttg	cagactctct	tgagattaaa	420
taagctaatg	tatgaatttc	ttttctcttt	tttctctctt	tttctctttt	gagatggagt	480
ctacacccgt	cacccaggt	ggagtacagt	g			511

<210> 50
 <211> 561
 <212> DNA

<213> Homo sapien

<400> 50

ccactgcact	ccagcctggg	tgacggaglg	agactctgtc	tcaaaaaaa	aaacaaacaa	60
acaaacaaaa	aactgaaaag	gaactcaggt	tccctcltcc	tcataataga	atacattatc	120
tcaacagatt	gltgalkaac	taaccatatgc	ttggatattgt	tctaatgtgt	ggggatatac	180
caagaggttc	tgcagaactt	catggagcat	gaaagttaat	aaacaaagtt	aatttcacgg	240
ccaggcatgg	ttgtccacac	cttttagctcc	agcactlctg	gaggctgag	caggtggatc	300
acttgggccc	aggagltcc	ggtgcagtg	agccaaagatt	gtgccactac	tctccaggtc	360
gggcaacaga	gcaagaccct	gtctcagggg	gaaacaaaag	ttaatttcag	atcttgltac	420
gtgctgtaaa	ggaagttaat	aggttgatat	tcaagagagc	acctgaaggc	caggcgttgt	480
ggctcagccc	tgtggtctaa	cgtcllctga	agcccgagct	ggcgatcac	aaagttagga	540
gaattttggc	caggtatgtt	g				561

<210> 51

<211> 451

<212> DNA

<213> Homo sapien

<400> 51

agaaatcatt	tattgggttt	taactagct	aaacaaactga	aalcaatttg	gcactacitt	60
atacagggat	tacgctcttg	tatgcagcat	cttaaalctc	gtaccaggac	cactgctgtg	120
cttaggtctg	tattcagtc	tccagcatgt	agcactctaa	aataactgtt	agtgghctcl	180
taaggaagac	tgtacagggt	gtgttgcaag	akqacattca	ccactclctg	aattatttca	240
atccaggaag	tacclctcc	tctalcaact	tgtcataggt	aaacatgtgg	tgtagcatt	300
gagagatgca	caacaaatgt	ttacataaaa	gttcagacat	tctaatgata	agtgaaclga	360
aaaaaaaaa	aacccacat	ctcaattttt	glatacaagt	aaagaaala	atttaaaac	420
atacgaactg	gacllctag	ggtaacaaag	c			451

<210> 52

<211> 682

<212> DNA

<213> Homo sapien

<400> 52

caaaatctcl	atataactcl	llgaaacaa	ttcagakga	alaaacatca	aagtttgcac	60
aaacgtgaag	attaacttan	ttgcacata	ttccclcttg	ccccaaatca	gcattttttt	120
tattttctatg	caaaagtatg	ccttcaaaat	gctlcaattga	tatatgatat	gatacacaaa	180
ccagtttttca	aatagtaaa	ccagtcactc	lgaatttgta	agaaataggl	aaagagcltat	240
aaagaaatcll	aaacacacac	aaacacacac	aaacacacgt	gtgcacacgc	aatgcacaa	300
aaacatttgg	cctctcctan	aataagaca	tgaagaccc	taattgtctg	caggagggaa	360
cactgtgtca	ccctcccta	caatccaggt	agllctctt	aatccaatag	caaaclctgg	420
catattttgag	aggagtgtat	ctgcacgcca	agttgaaat	cctglctggg	accattcatn	480
lcaacccact	ggtgcacatg	aaacatgca	ataattttlc	gtccacactt	ctgtgtctgt	540
ctcttcacaa	tctccacata	gacccagac	cagclctggc	ctggctgggc	atgcatttgc	600
tggtagagca	agtcataaggt	ctgtcttttg	acgltacaga	agcgatacac	caaaclctgt	660
ggcgggtcat	tgtcataacc	ag				682

<210> 53

<211> 311

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(311)

<223> n = A, T, C or G

<400> 53

tttgacttta	gtagggggtct	gaactattta	tttcaacttg	ccmgtaatat	ttaraccyta	60
tataatckkk	attatgccat	cttatcttct	aatgbcagg	gaacagwtgc	taamctggcl	120
tctgcattwa	tcacattaaa	aatggccttc	ttggaaatc	ttcttgaket	gaataaagg	180
tcttttavg	ccatcattta	aaagcmgntt	ctctccaaca	cgaghtctgc	aaaggggggk	240
gagctgtgaa	ctctgectga	agcctttccc	atacacactg	aatgacmtg	gltttctgac	300
agbgtgagtt	a					311

<210> 54

<211> 561

<212> DNA

<213> Homo sapien

<400> 54

agagaaagcc	cataaaagca	ctcngtgtgg	gaagaccttc	agtcagagcl	caagcctttt	60
cttcacatcat	cgggttcata	ctggagagaa	accttatgta	tgtcaahgat	ggggcagagc	120
ctttgggttt	aactctcacc	ttactgaacc	cgttaaggat	caacacaggag	aaaaaccccl	180
tgtttgtaat	gagtgcggca	aaagcttttc	tggagclcc	actcttggtc	agcctcgaag	240
agclccacat	ggggggaugc	cttaccagtg	cgllggaatg	gggaaagclt	tcagccagag	300
ctccacagtc	acctacatc	agccgagclt	acctggaga	gaagacctat	gactgtgggt	360
actgtgggaa	ggccllcaag	cggaagtcaa	ccctcalkca	gcacagaaa	gtlccacagc	420
gggngactcg	taagtgcaga	aaacatggtc	caagccttgt	tcatygcclc	agcctcacag	480
cagatggaca	gattcccat	ggaggggaugc	acggcagaac	ctttaccat	ggtgcaaatc	540
tcattclgcy	ctggaacggt	c				561

<210> 55

<211> 811

<212> DNA

<213> Homo sapien

<400> 55

gagacagggt	ctcaactlcl	caacccaggct	ggaatgcagcl	gttgcatctc	taactagctc	60
aatgcacccc	tgcacctctg	gaactaaaaca	atclclctgc	ctcagccctg	caaghaagctg	120
ggactgtggg	tgcattgcac	catgcclggc	taacttttgt	agcllcttctc	aaagatggggc	180
tttgccatgt	tgcacalycl	ggtcttqaac	tcctgagclt	gacgatctg	ccacactcgg	240
cttcccagaa	tggtgggatt	acaggggtaa	accacacagg	ctggcccat	tagggclall	300
llagcctcaa	cttgcctcat	gagattaate	akaggaatg	ataagcctg	gaaggaacaa	360
atttttacta	ggctttggat	attttttcc	tttttcagct	ttatacagag	gattggatct	420
ttagttttcc	tttaactgat	aaacaaacat	tgaaaggaaa	laagtttacc	tgagattcac	480
agagataacc	ggcalkactc	cttgcctcaa	ttccagclct	taccacatca	attattttca	540
gagglgcayy	atanaggcct	ttagctctgt	ttcgacatct	ttcttccact	llcttctgtaa	600
ctgtttgct	gacaaatgga	attgacagcg	tatgcacatg	ctattccatt	tgtcaggcat	660
acgtgtgcaa	tttttccacc	aatcccltgt	ctctctitgg	agagatcttc	ttatcagcta	720
gtcctttggc	aaagatcaat	gaactttctt	ctagglatc	tattgtcctg	tcacclggclg	780
gaacccctgg	gaacaggact	aaaacctcca	g			811

<210> 56

<211> 591

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature
 <222> (1)...(591)
 <223> n = A,T,C or G

<400> 56

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tcncagagac	ccccclagag	cggtttcttg	gtggagagca	tggcagtcac	aggacaaaat	120
acaaaactag	ggggctctgt	cttctcatac	alcatacaat	tttcaagtat	tttttttatg	180
tacaaagagc	tactctatct	gaaaaaact	taaaaaatat	atcgagacag	atagtttatg	240
cctcctagga	agaaagagag	ggaagaaaga	acggggcagc	tgggtacaga	ttcclgtccc	300
ctgttccag	ggaccactac	cttctgcca	ctgacttccc	ccacagcttc	acccatcatg	360
tcnagggca	agtgcacagg	taggtgggg	ccagtggaga	caggaaacag	ccacatactt	420
tggcctggaa	gataagggga	agctctcaga	acacactgg	gggagagca	tcacacnagg	480
cgtgccccan	gagcttccca	cctgctgctg	gctcactggg	tggctttggg	aacagcttgg	540
gaaagccat	ttgggtgggg	ccccactggg	cttttgggac	cgtgtggaaa	g	591

<210> 57
 <211> 481
 <212> DNA
 <213> Homo sapien

<400> 57

aaacattgag	atggaatgat	aggggtttccc	agaaacaggl	ccctatttta	actaaatgaa	60
aatlclagall	lacagccttc	tcaataacct	gactactctg	atatctcaac	cagagctaac	120
tttacctctt	tcccccllca	atagagaggl	aatctggatc	acaattttata	alacclglca	180
atttttcttg	tattaaacct	ctatctatgt	ttaagcctat	tagggtaccl	aatccttaca	240
aataaacagg	tttaaaatca	cctcaatagg	caactggccc	cttqnttttc	ttctttgact	300
aaacattclg	aatgcltlaag	attttccact	llqnttgcct	gcagtacaca	gtgttacact	360
ctgtattcca	gaattcttaa	allatnagaa	aaggaaatga	caatttttgt	attcttctcg	420
agcaggggcg	ggagggaaca	tcattctacca	tgttagggac	ttgcclgccl	gactactctt	480
a						481

<210> 58
 <211> 141
 <212> DNA
 <213> Homo sapien

<400> 58

actctgtcgc	ccaggetgga	gcccabtggm	gcgatclnca	ctccttgcaa	gotmccgctc	60
acaggtctct	gactclcttc	tgctcagca	ctggagatag	ctgggaactac	agggcgcagc	120
caccatgccc	agctaatttt	t				141

<210> 59
 <211> 191
 <212> DNA
 <213> Homo sapien

<400> 59

acattaaaga	cataggngaa	tttclactclg	gagagaaagc	ttacaaakgt	acggtttctg	60
acaagacttg	ggagtgtatc	acacctggaa	caacataclg	gaattcncac	tggabagaaa	120
ccttacazgt	gtaalaggtg	tggcaazgac	llbgagagag	agtaaacact	tattcaccat	180
caggaalcl	a					191

<210> 60
 <211> 480

<212> DNA

<213> Homo sapien

<400> 60

agtcaggatc	atgatggctc	agtttcccc	agcgatgaac	yyggggccaa	atatgtgggc	60
tattacatct	gagggccgta	ctaaagcgtga	taaacagllh	qataacctca	aaacttcaag	120
aggttacata	acaggtgac	aagcccgtag	tttttctcta	cagtcaggtc	cyccggccccc	180
ggtttttagct	gaaatatggg	cattatcaga	tcfgaacaag	gatgggaaga	tggaccagca	240
agagttctct	atagctatga	aactcatcaa	gttaaggttg	cagggtccac	agctgectgt	300
agtcctccct	ctatctcaga	accacccccc	tatgttctct	caactaatct	ctgctcgtll	360
tgggatggga	agcatgcccc	atctgtccat	tcctcagcca	ttgctccag	ctgcacatct	420
agcaccaccc	ttgtctcttg	ctacttcagg	gagcagattt	ctctccctact	gatgectgt	480

<210> 61

<211> 381

<212> DNA

<213> Homo sapien

<400> 61

cttctgattt	ccttcaattt	gtcaggtttg	atcttatgaa	gttcttcaag	ggctaactgc	60
lqlqlalalal	agctttctct	gagttccttc	agctgaltgt	taaatgaatc	catttctgag	120
agcttagatg	cagtttctll	ttcagagaga	tataattgtt	ctttaagctc	llggcataal	180
tcttcttttt	ctgatgaact	tctatgaagt	aaactgacac	ctgaattcag	tgtgttaactg	240
agctgacatg	ttttaattct	ttcgtttaat	agctgctctt	cagggaaccag	atagataagc	300
ttactttgat	attctttaag	ctctllygtga	ggttgttoga	tttcataat	llcccaqgtac	360
cactggttat	cccaaacctt	t				381

<210> 62

<211> 906

<212> DNA

<213> Homo sapien

<400> 62

gtggaggtga	aacggaggca	ggggaggggg	ctacctcagg	agcgaggggc	aaagggggcg	60
tgaggcaact	agcccgccgc	accccgccga	caggaagccg	tcctgaacat	gggtacccgg	120
laggggaag	gcccggtag	tcttcgcagg	gcccaggggc	tggagtccgc	tccacagccc	180
cgggccctcg	gtttctaccl	tcctgaacat	ccccggccgc	cggtccctgag	gactggctcg	240
gcgaggggag	aagaggaaac	agacttgagc	agctccccgt	tgtcllygaa	ctctacclgac	300
gaggaactct	catttcttcc	ctcgtccttt	caccccccac	ctcatgtagn	aaggtgctga	360
agcgtcccg	gggaggaaga	acctgggcta	ccglctgtgc	cttcccccac	ccttcccggg	420
gagctttggt	gggcgtggag	llgggllly	gggggtgggt	gggggttctt	tttggagtg	480
ctggggaaat	tttttccctt	cttcnggtcn	ggggaaaggg	aatgcccac	ltagagagac	540
atgggggcaa	gaaggacggg	agtggaggag	cttctgggac	tttccagccg	tcctccggag	600
gcggcagctc	tcacagccga	gagcgtcacc	gcttcttctc	gaagcacaag	cggcataagt	660
cccaacactc	caaagacatg	gggttctgtg	cccccggaag	agcatccctg	ggcacagtta	720
tcacaacctt	ggtggagtat	gatgatatac	gctctgatl	ctgacacctc	tcctatgag	780
tggccttcac	acagagccga	agggagaaag	acgaacgtcg	tggatccagat	cggagccgac	840
gctgcacaa	acatcgtcac	ccccagccga	ggcgttcccg	ggacttacta	aaagctaac	900
agacccg						906

<210> 63

<211> 491

<212> DNA

<213> Homo sapien

<400> 63

gacatgttttg	ccctgcagggg	accagagaca	aknggattag	ccagtgtctca	clgtttcttta	60
hgtttccaga	gaggatgggg	acagctctca	ggtcagaate	caggctgaga	aggtccatgct	120
ggttgggggc	ccccggaagc	acggctcggg	tctccclgg	cattcagcgt	gacccgtgc	180
tcaggcttgg	ggtaaccaaa	tcctgtctctg	tactgttttg	gccccatggg	gtgagaggaa	240
aacctagaaa	aggtattggtc	gtgctaagga	atcagctgcc	ccctcatcct	cggatccaa	300
tgtgtgtgac	aacctatttc	ctctccagg	accagagctc	ggtgactcca	cattgggctg	360
agtggcctct	ggaggctcgt	ggctcaggc	agggctcgt	aaggctgac	ggctgaactg	420
ggtaggggtga	gggtttctga	cccttgcctt	cccatccat	aacgtgtgc	aatgagctca	480
cactgtggtc	a					491

<210> 64

<211> 511

<212> DNA

<213> Homo sapien

<400> 64

gatggcatgg	tcgttgcata	tgtgcctgct	gggalggggc	acttctctcl	gtgagccacg	60
gggacccgcc	tgctccrnga	gcttggggca	aggggggag	agtgaacca	ggaaggtggg	120
gctgagagca	ggggcagag	ccagllcagg	gagtggctcl	cggccctcaa	agctctccag	180
gggactgctc	aggagtgatg	gtgcctcggg	gtttccccc	acttccctgg	cccccctgga	240
aggtgcctgg	ctgctccagg	cctctaggtc	gggtgtgatg	gtttclccag	gacacaagta	300
tcattcaagg	ccctctctct	ccagllcagg	ggggcagca	ggggagacag	gctgtgtctc	360
ccacccctct	gcttgcctg	ccctccatca	ggaggagaca	gtggaacctt	cgggaagctc	420
ccagcatctc	agcagccctc	aaaagtctgc	ctggggcang	ctctggttct	ccctgagctgg	480
ggtcatctgg	gcttggcctg	ctctctctct	a			511

<210> 65

<211> 394

<212> DNA

<213> Homo sapien

<400> 65

taaaaaagtg	taacaaaggt	ttattttagc	hctcttcctg	ccccagall	caggatgtct	60
atgtaaaccc	ctatcttcca	agagagagac	aatatttggc	alacactaac	tcagtgcctt	120
gcttaaccca	cattgcctcc	ntccaanagt	gggttttaag	taaaactaac	tgacgatatt	180
ggcgggggac	ctgcagtttg	gactgcctgc	cggglltgct	cagggttccg	ggctcagllcl	240
tggtactcat	ggggacagge	atcctgctcg	ctgttgaggc	cccgctgggg	cccttactgt	300
agctcgaagg	ctctgacact	gggggctct	agggcagtg	gacctcactc	cgggaactaac	360
aggggtcagg	gagaggcctc	ctgggctatg	tggg			394

<210> 66

<211> 359

<212> DNA

<213> Homo sapien

<400> 66

ccaggcttcc	tttatggatg	tacattcaaa	cagtcacgt	gagccatccc	gggtgacag	60
tcacgttwaa	gacactaggt	cgggcgccac	agtgccaccc	aaggagaaga	agaatttggc	120
atttttccat	gaagatgtac	ggaaatctga	tgttgaatat	gaaaatggcc	ccccaatgga	180
attccaaaag	gttaccacag	gggtctglaag	acctagtga	ccctctaat	gggaagagg	240
aattggagat	agtattttct	atgcctcang	aacatcagaa	tataaaactg	agatcataat	300
gaaaggaagt	tcctatatca	atatgagttt	actcagagac	agtagaaact	attcccagg	359

<210> 67

<211> 450

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(450)

<223> n = A,T,C or G

<400> 67

taggaataac	aaatgtttat	tcagaaatgg	ataagtaata	ataatcacc	cttcatctct	60
taalgcacct	tctctctctt	ctgacacagg	gacacacatg	ggtacatag	atgcattggg	120
agtggaggag	gacacaggac	tagccaccca	actctctctt	cgggtctctt	aagatgactg	180
cttctagagat	ggaggaggca	aacaggctcc	ctcaatgtat	caatgggta	cttatagcac	240
cagctccaga	tggccacatg	gttgcagctg	gaactaatga	aactctgtga	caccacagaag	300
atacctgctt	tgggatgaga	gggaggataa	agccatgtag	ggaggtatct	taccatccct	360
accctaacca	cagtgcacag	agtgacaccc	cggctctcag	tacctgaaaa	accacagcct	420
actgactttt	ggatgctctt	ttgggacacg				450

<210> 68

<211> 511

<212> DNA

<213> Homo sapien

<400> 68

aagcctcctg	ccttggaaat	ctggagcccc	ttggagctga	gctggacggg	gcayggaggg	60
gctgagaggg	aagaccgtct	cctcctctgt	gaagctgctt	ccccagcayc	cacttcttgg	120
cacagcagaa	atgcacagaa	agacacatgg	agccagagat	ccttagccct	ggagctgagg	180
ctgctctctg	gctgacccgc	tgcctgtacg	tggccagaaa	tggggttggc	atctggcatc	240
catttgaggg	cagggttgag	gaaaggaggg	ccacacaggg	aaaacctatt	cctgctgtga	300
caacacagcc	cttgtccac	gcagcctaag	tgacagggag	gtgatgaagt	caggtacgca	360
gtcggggagg	acgaggtaac	tcagcagcna	tctcactctg	tagcctalgc	gttcaatggc	420
caggaggggc	agcaccgcna	tgccacatct	agccacagcc	agtgactctg	caggcaccaa	480
gagagcgatg	atggacttga	gcgcctgttt	c			511

<210> 69

<211> 511

<212> DNA

<213> Homo sapien

<400> 69

gtttggcaga	agacatgttt	aataacattt	tcatatttaa	aaahacacac	aaacattctc	60
taactgtcca	ccatcttccc	ttgcctctcc	tgggctctga	gcagacaaag	gaaaggtaat	120
gaggttaggg	ccccaggccg	ggctaagtgc	tattggcctg	ctcctgtcca	aagagagcca	180
tagccagctg	ggcaccggcc	cctagccctt	ccaggttgc	gagggcgag	cgttgghagg	240
gtttcttaact	gagccgtggg	ctgcagctct	gcaggagaga	cttctgcacc	agccttggct	300
ctagggcacg	aaatagctga	agccctgaga	acgggagga	aaatccatc	acctccagcc	360
cctccagggc	ttcctcctct	tcttggcctg	ccagtcacac	tgcacgcagg	gctcggggcg	420
ccaggttagtc	agcgtttag	aagcagccct	ccagagaagc	ctgcgggtca	aatctccccc	480
ctataggagc	ccccggggag	gggtcagcac	c			511

<210> 70

<211> 511

<212> DNA

<213> Homo sapien

<400> 70

caagttgaac	gtcaggettg	gcnnaggttg	agttagatg	naaacaaag	tgtgatlatg	60
aagaggtatg	gagtccttly	ngttagggag	naaaaggclg	ttgagctket	atttcagat	120
acttttacc	glgnanag	cacattttcc	noctccclkt	catggcattt	gtgl,aaggtg	180
aglatgatto	ctattccatc	tgcattttag	aggtgaagaa	taacgtacaa	gggattcagt	240
gattagcaag	ggacccctca	ctagaggttg	alhgagttag	gacagagctc	agctgtttga	300
atctcagagc	ncaggcagct	ggagctgggl	aggatccleg	agctggcact	aatgltgagct	360
gcatttccctc	caacccaggc	tcagatccgg	aaactgaacg	tgtgtgcccc	cganngggag	420
gcagggtctga	gctggcccg	lyngctccct	gchcttttca	caacacactc	lcnctttgag	480
gtgcctgggct	gggactactt	cacagagcau	a			511

<210> 71

<211> 511

<212> DNA

<213> Homo sapien

<400> 71

tggcctgggg	aggattggga	gagaggttag	tacnnggatg	caglcctttg	ggatganngc	60
latagggat	gaccccatca	tttccccaga	ggtctgggce	lcnctttggtg	ctcagcagct	120
gcccctggag	gagatctggc	ctctcltqng	tttcatccct	gtgcacacck	ctctctctgce	180
ctccacgaca	ggcllytlyg	atgacacac	cttlyncacg	tgcacgaggg	gggtgcglg	240
ggtgactctg	gcccgtggag	ggatcgtgga	cgaaggcgcc	lcnctccggg	cnctgcagtc	300
tggccagtgt	gcccgggctg	cactgganly	gtttacggga	gagccggccac	gggacccggg	360
cttggtggac	catgagaatg	lcnlcnagctg	tccccanctg	ggtgccagun	ccaaggaggg	420
tcagagccgc	tgtggggung	aatattgctgt	tcagllctgtg	gacatgggha	aggggaatc	480
tctnccgggg	gltgtgagtg	cccaggccct	t			511

<210> 72

<211> 2017

<212> DNA

<213> Homo sapien

<400> 72

agcagactga	ctgagagctg	caagaagaag	lcnaggatcat	galgagctcag	tttcccacag	60
agatgaatgg	agggccaaat	atgtgggclg	ttacatctga	agaaagctact	aagcaltgntn	120
aacagtttga	taacctcaaa	ccclcnanng	gttacalanc	aggtgatcaa	gcccgtactt	180
ttttccctaca	glcnaggtctg	ccggccccgg	ctttagctga	aatatgggce	ttatcagatc	240
tgcacagggg	tgggaagatg	gaccagcaag	antctctctat	agctatgaaa	ctcatcaagl	300
taagtttgcg	gggcccacag	ctgccclylag	tccctcccln	tatcatgaaa	caacccacta	360
tgttctctcc	anlambctct	gtctgttttg	ggalyggag	catgcccaak	ctgtccatto	420
atcagucatt	gctccagttt	gacccatag	caacnccctt	gtcltctgtct	acttcagggg	480
ccagtattcc	tcccctaattg	atgcckgctc	ccctagtgc	ttctgttagt	acatccctcat	540
tacczaatgg	aanctccagt	ctcattcagc	cttlatccat	tcttatctct	tcttcaacat	600
tgcctcatgc	atcatcttcc	agcctgatga	lccggaggatt	lgnctgggtct	agtatccag	660
agggccagtc	tctgattgat	ttaggalcly	gtagctcaac	ttccccaact	gcttccctct	720
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agcagcagca	gagggaggct	gaaagcaag	cccaagaaaga	gaaggagag	tgggagcgga	1260
aacagagag	actgcaagag	ccagaaatgga	agaaagcagct	ggagttggag	aaacgcttgg	1320

agaaacagag	agagctggag	agacagggg	agggagagag	gagagaggag	alagaaagac	1300
gagaggcagc	aaacagggg	cttgagagac	agggcgggtt	agagctggga	agactccgtc	1440
ggcagagct	gctcagtcag	aagaccagg	aacaaagaga	cattgtcagg	ctgagctcc	1500
gaaagaaaag	tctccacctg	gagctggag	cagtgagtg	aaaacatcag	cagatctcag	1560
gcagactaca	agctgtccaa	atcagaaagc	aaacacaaa	gactgagcta	gaggttttg	1620
algaacagt	tgacctggaa	attatggaaa	tcaaacact	tcaacagag	cttaaggaa	1680
atcaaaataa	gcttatctal	ctgttccctg	agagcgagct	attcaacgaa	agaalacaa	1740
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aaagagaaag	attatgocaa	agacttaaa	gacaaatag	tctcttgaa	aaagaaactg	1860
catctaaagt	ctcagaaatg	gactcattta	acaalcagct	gaaggaaact	agagaaagct	1920
ataatagaca	gaggtttgac	cttgaacaa	lactataaat	caaacgtgac	aaatagagg	1980
aaatcgaaag	aaaaagatta	gagcaaaa	naaaaa			2017

<210> 73

<211> 414

<212> DNA

<213> Homo sapien

<400> 73

alggagagtg	gattccagct	cctgggaacc	accttccct	ttcttcagga	ttcttcagga	60
tgaagagag	cctccagctg	tgggctgaaa	acactcgana	gtaggagag	gagctcaaa	120
taatragtat	ctcagagggc	tctaaggctg	aaagagagct	cactggagct	ttagtgaca	180
acaaagggat	actttcggaa	tcgagagagc	aaactttct	aaacttgct	tctctcagag	240
aaagagagag	ctcagagctg	tactgcttta	gaggagagct	cagaaactg	gtgttaca	300
gaaaaacagg	agcaattaga	aatgggttcc	acttttcaa	gctccgcaa	agagatgct	360
tttcttttg	ccatttaggg	tttcttctct	ttctttctc	tttcttctc	acta	414

<210> 74

<211> 1567

<212> DNA

<213> Homo sapien

<400> 74

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aggtcccaal	algaagagag	aaatctatc	ttcaagagac	laltagaggt	tgggaaaata	120
attcatgtga	actagacaag	tgtgttaaga	gtglaagta	aaatgcacgt	ggagacaggt	180
gcacccccag	atctcaggga	cctcccccly	cctgtcacct	ggggagtgag	aggaacaggt	240
agtgcaalql	ctttgtctct	gaatttttag	ttacatgag	gttaatgttg	ctctgaggaa	300
gcacctggaa	agtttatccc	aaatatacca	calcttatat	tccacaaatt	aagctgagag	360
atgtacccta	agacgtgtgt	aattgaclyr	cacttcgcaa	ctcaggggag	gctgactttt	420
agtaatgggt	caaalgalic	attttttatg	atgttccaa	aggtgccttg	gcttctcttc	480
ccagtgagc	aatgcgaag	tggagaaaa	tgatcalat	tttagcataa	acagagcagt	540
gggagacac	gattttataa	ataaactgag	caacttcttt	ttaascaaac	aaalggagg	600
ttattttca	gatgatgttc	atccgtgagt	ggtccaggga	aggacttttc	accttgacta	660
tatgtcatta	tgacatgaga	agctctgag	cttctctttt	aatctctgag	tggacagcta	720
agactccagt	tttcaataga	atctagagca	gtgggagcl	gctgggggtg	tttgcctccc	780
catctccggg	ggaatgtctg	aagacaattt	tgltactctc	atgagggagt	ggaggaagag	840
acagtgtctc	taccaactag	tggataaag	ccagggatgc	tgltcagact	actacactgt	900
acaggaagtc	tccacttttc	aaclacccaa	tccgaagtgl	aaactgtgtc	aggactaaga	960
aaactgtglt	ttgaatagaa	aaagggcctg	aaagggggag	gccaacaaat	ctgtctgctt	1020
cctcacttta	gtcattggca	aataagcatt	clgtctcttt	ggctgctgct	tcagacagag	1080
gagccagaa	tctatcgggc	accaggataa	catctctcag	tgaacagagt	tgaacagagc	1140
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cattctaccc	tgcagagcaa	gttctgtam	agaaatgcct	gagttctagc	tcagggttttc	1260
ttactctgaa	tlagagcltc	cagacccctc	ctggccacaa	ttcaaaltaa	ggcaacaaac	1320

atataccttc	catgaagcac	acacagactt	ttgaaagcna	ggacaabnac	tgcttgactt	1380
gaggccttga	ggaatgaagc	tllqaaaggaa	aagaatactt	tgcttccagc	ccctttccca	1440
caactcttca	glttfaacca	ctgccttcc	ggaccttga	ggcaggtga	cggtattaca	1500
tattgtata	gannaotgat	tttagaglk	tgatcgtlca	agagaatgal	taaatataca	1560
tttcta						1567

<210> 75

<211> 240

<212> DNA

<213> Homo sapien

<400> 75

tcgagggag	gcgggggag	gtccltcag	cttggaactgt	gtcacactgc	caggcttcca	60
gggtcccaac	ttgcagggg	ctgtttgtgg	gacagtctct	gtaatcagga	angcaaccat	120
ggaagacctg	ggggaaaaca	ccatggtttt	akcncacctg	agatctttga	acaacttcat	180
ctctcagcgt	gcggggggag	gctctggact	ggatatttct	acctcggccg	cgaccacgt	240

<210> 76

<211> 330

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (330)

<223> n = A, T, C or G

<400> 76

tagcgyggtc	gcggccgagg	ycfgettylc	tgtccagccc	agggcctgtg	gggtcagggc	60
ggttggtgaa	gatqqaatcc	actccggtgg	cttcccccac	tttctctggc	ctgaqqaagg	120
tcagcctgca	gccagagtaa	agagggccaa	caatgggtgt	cttgaaagag	ggccttagca	180
ggccttgaag	gcccctctct	gtagtglia	acitcctgga	gccaggccac	atgttctcct	240
calamngcaq	qytanynabq	qtnaagttga	gggtgaagta	gtatimangr	agelqyqclq	300
carccttqcc	cgggcgggcc	ctcassatcc				330

<210> 77

<211> 361

<212> DNA

<213> Homo sapien

<400> 77

agcgtggtcg	cgcccgaggt	gtccttcagg	gtctgcttat	gccttctgtc	aagaacacca	60
gtctcagctc	tcctglantct	ggttgcagac	tgaccttgc	caggcctgag	aaggalgggg	120
cagccacacag	agtggatgct	gtctgcaccc	atcgttctga	ccccaaaagc	actggactgg	180
acagagagcg	gctgtacttg	aagctgagcc	agctgcacca	cggccttact	gagctggggc	240
cctacacccct	ggacagggac	agtctctatg	tcaatggttt	cacccatcgg	agctctgtac	300
ccaccacacag	caccgggggtg	gtcagucagq	agccattcaa	actgcacggg	cggccgctcg	360
a						361

<210> 78

<211> 366

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature
 <222> (1)... (356)
 <223> n = A,T,C or G

<400> 78

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actgaacttc	accatcaaca	actgoggta	tgaggagaac	atgcagcacc	ctggctccag	120
gaagttcaac	acacgggaga	gggtccttca	gggctgcttc	aggtccctgt	tcaagagcac	180
cagttttggc	cctctgtact	ctggttgag	actgactttg	ctcagacttg	agaaacttgg	240
ggcagccact	ggagtggagc	ccctctgcac	cttgggcttc	gatacggctg	gtcctggact	300
ggacagagag	cgggtctact	gggagctgag	ccagtctctc	ggcgngacn	ccnctt	356

<210> 79
 <211> 226
 <212> DNA
 <213> Homo sapien

<400> 79

agcgtggctcg	cggccgaggt	ccagtgcacg	catgctcttt	ctcttgcctc	ctggcacagt	60
gaggaagatc	tctgctgtca	gtgagagggc	tgctctccac	tgagatggca	gtcaaaagtg	120
catttaatac	acctacagta	tgaacatca	lagncttgcc	cagggtatct	catatgtgtc	180
cagaaacact	acatacctct	gcagacctgc	cggggggccc	gctcga		226

<210> 80
 <211> 444
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (444)
 <223> n = A,T,C or G

<400> 80

tgtaggtgtg	aacttcttgg	agncagggtg	acccctgtcc	tcccaaat	gcaggtttgt	60
galgttgaag	ttgagggtga	atggtaaccg	gagagggtca	gcagccataa	ttgtgrrck	120
gsmgmasgag	gmwggwtgty	cwgagttcty	rxrtccct	gtggaggctc	caggagttct	180
ggtggtgggc	acagaggtcty	gatgggtgaa	acnattgaca	tagagactgt	tctgtccag	240
gggtatgggg	cccagctctt	yratgycatt	ggycagtttg	ctyagctccc	agtacagctc	300
ctctckgyyg	mgwccagagc	llllggggtc	agatgcttg	atgcagatgg	cttccactcc	360
agtggctgct	ccalctttct	cggacctgag	agaytccagt	ctgcagccag	agtacagagg	420
gccaaacclg	gtgtcttttg	aata				444

<210> 81
 <211> 310
 <212> DNA
 <213> Homo sapien

<400> 81

ttagaggggcc	gcccgggag	gtcaggaagc	acattgtctc	tagagccact	gctctctgga	60
ttccacctgt	gtctcggtta	tctccaggga	gtcaggaagg	gaagcaggta	caactgtctc	120
gacragtcag	actgtctgtt	ctcagttctc	acctgagcaa	ggtcagltct	cagccagagt	180
acagagggcc	caactgtgtg	ttcttgaaca	gggcttgag	cagaccttgc	agaacctctc	240
lccgtggtgt	tgaacttctc	ggaaacccag	gtgttgcatg	tttctctca	taatgcagg	300
ttggtgatgg						310

<210> 82
 <211> 571
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1)...(571)
 <223> n = A,T,C or G

<400> 82
 acgggtttcaa tggacacttt tattgtttac ttaattggatc atcaal.tttg tctcentacc 60
 tacaaatgga atttcatctt gtttccalys tgaagtatga aaatgtgaca aagctaatca 120
 laataacola catcaaaaag gaactaagct aacactgctc actttctttt ttaacaggcaa 180
 aatataaata tatqantctt anaatgcaca atggllttagt caataaaaaa ttcaaatggg 240
 atcttgaaga atgtatgcaa atccagggtg cagtgaagat gagctgagal qctgtgcaac 300
 tgtttaaggg ttcttggcac tgcattctct tgcactagc tgaatcttga catggaaggt 360
 tttaagclaat gccaagtggg gatlcccaann atgctaagtl qanttcaggg ctgtgcacag 420
 gaactaaaag gcaggnaagt actaaatatt gctgaagaca tccacccacg gaaggacttt 480
 accttccagg agctccaaac tggcaccacc tccagtgcct acatggetga cltctacttc 540
 cglqltccat ttggacacag aaqltgcagt g

<210> 83
 <211> 551
 <212> DNA
 <213> Homo sapien

<400> 83
 aaggtctgtg qgtttttgat ccigtctggag aacctccagt ttcatgttga ggaagaaggg 60
 aagggaaaag atgcttcttg gaacaagggt aaagccagag cagccaaaat agaagcttct 120
 cgaacttcac ttcccaagcl aggggatctc intgtcaatg atgttllly cactgctcnc 180
 aagccctacc gctccatggt aggagtcaat ctgcacacaa aggtctggtg gtttttgatg 240
 aagaaggagc tgaactactt tgcaaggccc clunagagcc cagagccacc ctctctggcc 300
 atcttggggc gagclaaayl lgaaygcaag atccagctca tcaatcactat gctggacana 360
 gtcactgaga tttattatgg tgggtgaatg gcttttcaat tctttaaggt gctcaacaac 420
 atggagattg gaacttctct gtttgatgaa gagggaqcca agattgtcaa agacctaaag 480
 tccaaagctg agaagaatgg tgtgaagali accttgcttg ttgaactllyt cactgctgac 540
 aagtttgalg a

<210> 84
 <211> 571
 <212> DNA
 <213> Homo sapien

<400> 84
 tttgttccct acalhhhtct aaggaattac tcaaatcagt caatgtgtot ttgagactct 60
 taagllcllyg htcnaactta gctaatccat tctgagaaat gtggtatagg tggcgtgtct 120
 cltctantctg qgacaaaagt tctttgtttt cctctcttag agtatccacg accttctgcl 180
 gaagctggac ctctgtcttg gccttggact ctcaaatctg ctgttcatgt tcaagcllyg 240
 aatqtiaat cttaattctt tccatctgga tggacatctg tctaaglllyg tcttttagaa 300
 cactgcaatt atcttctttg agtctaatct ctctctctct gcttggactc gcatcactaa 360
 acttctctct caatttctta gcttctctct tcaactctgt agatcctcc tggagggaag 420
 acatgctclt agtaaaaggt gcaagctggg tcaactctct gtcnaagttt tcttgaaylt 480
 gctgaacttc ctgtctcttc ttgttcaaaag tcaactgaat ctctccaatt gcttcttcca 540

atgtggaatttt ttctctgcgc aaagcatcna g

571

<210> 85
 <211> 561
 <212> DNA
 <213> Homo sapien

<400> 85

tcattgcctg	tgatggcctc	tggaatgtga	tgagcagcca	ggaggttgta	gatttcattc	60
aatcaaagga	ttcagcatgt	ggtggaagcl	gtgaggcaag	ggaacaaga	actgtatggc	120
aagttaagaa	gcacagaggc	aaacagagag	gagacagaa	agcagttgc	ggaagctgag	180
caagaaatgg	aggaatatga	agaaaagatg	agagagtttg	ctaasltta	acagcagaaa	240
atcctagagc	tggagaaga	gaatgaccgg	cttagggcag	aggtgcaccc	tgtagggagc	300
acaggttaag	agtgtatgga	aacacclctt	tcttccaaag	ccagcatgaa	ggaagaactt	360
gaaagggtca	aatgagagta	tgaacaccc	tctaagaggt	ttcagttctt	aatgtctgag	420
aaagactctc	taagtgaaga	ggttcaagat	tlavagcacc	agatagagag	taatgtatct	480
aaacaagcta	acctagaggg	caccgagaaa	catgataacc	aaacagaggt	cactgaagag	540
ggagacaggt	ctatcaccag	c				561

<210> 86
 <211> 795
 <212> DNA
 <213> Homo sapien

<400> 86

nagccantaa	tcnccattta	ttacttaaca	tatgcacacc	actgtacttg	gcagtlccaa	60
aattctcacc	gttacaaaca	cccatgagg	talctattcc	cattctakag	ataggggaaa	120
cacagclcaa	gtlaagtlagg	aaactggguc	aggtatacac	agatatacaa	gtggcaaaac	180
tagaaggaaa	gaatgacact	gtatatctgt	ggcctcaggt	gtcctggctc	ttlccacacg	240
ggttcaatgt	ctccagcgct	gtgtgtgtgt	ctgcattacc	atgcctcact	tgtttttctt	300
actclggcgl	lcaactgccl	actlcaagag	atctaactca	tlccagagac	cacttatttc	360
ttctctctct	tctgaattta	cttttaatan	ttcttcagag	gggggaaaag	aagatgcttg	420
ttggtagttt	tggtgtttta	gtgtgtcaac	ttgggaattta	aacaatttgt	ttlcatcttg	480
tacatcctgt	aacagctgtg	ttgtgtctga	aggtcctctc	tcctctctcl	ttagcctagg	540
ttclacactc	tlcaallccl	tlclclclcl	ttccacacac	atctcaggtt	cttcaaacctg	600
tgatgcagaa	gaggcctctt	tcaggttatg	ttgtgtctct	tcctgaacac	gtgcltttaa	660
agattcattt	tcttcttgaa	gatctgttaa	ccacttccct	gtatctgctc	ggctcttctc	720
tttclclcl	aaacagagcl	lcalgylact	catctgttcc	lcttttccct	ttaataagtt	780
caggagcttc	agaac					795

<210> 87
 <211> 594
 <212> DNA
 <213> Homo sapien

<400> 87

csagcltttt	tttlllllll	aaasagllgh	agcattaatg	lcttattgtc	acgcagatgg	60
caactgggcl	tatgtcttcc	tatcttatct	ttttgtaash	taaaaaaatt	acaagtttta	120
aatagccaat	ggctgggttat	attttcagaa	aacalgttta	gactaattca	tlcaagylgg	180
cttcaagctt	ttccttattg	gtccagagaa	aktcaccac	cttltgkccc	ttcttggaaa	240
actggaatgt	tggcagtcac	ttgacttca	actctgaagc	cccatcctga	cagtcattcca	300
cactclactcl	aggaatatc	aghttgagct	acttttctga	gagggaatga	aagaaaggct	360
tgatcatttt	gcaaggccca	caccnctgg	ctgagaggtc	aactactaca	agtlclactca	420
ctgcagcgtc	caaggcttcc	tgaaaagcag	lcttgcctct	gatctgcttc	acactcttgg	480
ctgtctggag	ctgacagagc	gctgttaagg	ccgatggaaa	tggatccaaa	gcacccnaca	540

gagcttccaa actcgcctgct tggcttgaat. tgggaccca catcgccatg gct 594

<210> 88
 <211> 557
 <212> DNA
 <213> Homo sapien

<400> 88

aagtgttagc	attaatgttt	lctgttcacg	cagatgggaa	ctgggtttat	ghcttcatat	60
tttatntttt	tgttaattta	aaaaattmca	agtttttaaat	agccaaalqnc	tggttatatc	120
ttcagaaaac	atgatttagac	taattcalka	atgggtggctt	ccagcttttc	cttatttqct	180
ccagaaatll	caccacactll	ctgtcccttc	ttaaaaact	ggaatgtttg	catgcatttg	240
ccttcacact	ctgaagcacc	atcctgacag	tcttcacacat	ctacttcacg	gaatatcacg	300
ttggataact	tttcagagag	ggaatgaaaq	aaaggcttga	tcattttgca	agggccacac	360
cacgtggctg	agaagtcaac	tactaacagt	ttatcacctg	cagcgtccaa	ggcttactga	420
aaagcaatcl	tgctctcagat	ctgcttcacc	atcttggctg	ctggagctcg	acagagcgct	480
gtaaagaccc	atggaacttg	atccaaagca	ccaaaacagag	cttcaagacl	ctgtgcttgg	540
catgaattcg	gacccga					557

<210> 89
 <211> 561
 <212> DNA
 <213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{561}

<223> n = A,T,C or G

<400> 89

tacaaacttc	attgaaacgc	acacgcgcac	acacacacac	acccctgtgg	alaggggaaa	60
gcacctggcc	acagggtcca	ctgaacacgg	gaggggatgg	cagcttctca	tgtggctttt	120
gcccacaccc	acttctgaca	gggaaggcct	tagattgagg	ccccacctcc	catgggtgatg	180
ggagagctca	aatggggctc	agggagaatt	tgggttgggg	gaggtgctag	ggagggcatgg	240
gcagagggca	ccctccgagt	ggggcccccq	gggtgcaga	gtcttcacta	ctgtccctca	300
cagcagcgtt	ctcagggctg	gttccctcaa	agggggctcc	caggcggggg	cctccctggc	360
cacacacttc	gtacccctgg	ctgcgcagcg	gaagcaccgc	ggacagcagt	ggcgcagatc	420
agcaccacac	acgcctctgg	ggtagggaca	gcaggtccac	ccctgtcggg	tgtctcgggc	480
gcaggtcttg	ttatcatggc	agaagtgttc	ltccacacac	tcaagtcctt	cacacccacg	540
tganngctac	nggcacggaa	g				561

<210> 90
 <211> 561
 <212> DNA
 <213> Homo sapien

<400> 90

cccgtgggtg	ccatccacgg	agttgtttac	lactcttttg	aagcaggatc	gacagctctac	60
actgcagtgg	aagcccccgt	ggcagcagly	atggccatcc	cgcacagacc	aggcctctgg	120
gaagggggcag	caactggaag	lccctggagc	ggtaagatg	caggagctgg	cggcagagca	180
gtagggatcc	acctggcagg	ggcaccacag	atgcctgctc	actgtttgtg	gccattttgtc	240
cagaaaggga	cggcagcagc	tgtagctggc	tccctcgggg	tccaggcagc	agggccacgg	300
gcagaaatga	ccatctgggc	accgcgttcc	agccaccagc	cctgctgtta	aggccaccca	360
gtccaccagg	gtcccccagg	tctgctctgg	tccgactccg	cggctccttg	ggcctgatgg	420
ttctacclgc	tgtgagctgc	ccagctggga	gtatggctgc	tgccacagcc	caacgcaccc	480

tgtgtgtctcgt atcaccctgca ctgtctgccc: aagacactgc ntgtgacctg atccagayta 540
agtgcctctc caagagagaac g 561

<210> 91
<211> 541
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(541)
<223> n = A,T,C or G

<400> 91
gaatcacctt tctggtttag ctagtacttl gtacagaaac atgaggtttc ccaacagcga 60
gtctccctgg gccctgtttg gctctcctga aggcaggcct acaccttttc ctctctctta 120
tggagagggg actatgcctt aaggtgaaaa gtccctcttc aaagtgagc aagggattcg 180
attgctggtt caggactgtg gaattatttg gaattgttta caaatngttg ctacaaaaaa 240
acaaaaaagg taattacaaa atgtglatat cacaacatga ttttraaaga catlatgcat 300
tgtgctcaca ttccctttaa tltgttttcc aaagtgcttc agccctctag ccagctggat 360
tcttggggga ggggcagaga cagtttgccg aaaaatgac agggagggag ggggtggtag 420
aaggagaaag cagccttcca gtaaaagac agccctcagt taaaggtcag ctcccggaan 480
gctggcctca ngcggagctt gggctcagaa gaggagcaga ngcagggttg gactggggcg 540
t 561

<210> 92
<211> 551
<212> DNA
<213> Homo sapien

<400> 92
aacccgagcg cagacagtag ctgggtgggc accatggctg ggtacaccac caccagggcg 60
gtgaagcgca agatccaggc tctgctcctg caggcagatg atgcagagga cgcagctcag 120
cgctctcctg gggaggttga nngagaaaaa cgggcccggg aacaggtcga ggttnggtg 180
gcctccttga accgtaggat ccagctgggt gggagagaga tggaccttgc tcaggagcgc 240
ctggccactg cctgcacaaa gctgggaagg gctgaaaaa ctgctgatga gagcagagga 300
ggatagaaay tctctcagaa ccgggcctta aaagatgaag aaaagatgga acttctggga 360
atctcctctc aagagctaa gacattgca gaaagggcag ataggaagta tgaagaggtg 420
gctgtgaagt tggtagcat tgaaggagac ttggaacgca cagaggaacg agctgagctg 480
gcagagtcct gttgcagaga gattgagga cagattaga: tcatggacca gaacctgaag 540
tgtctgagtg c 561

<210> 93
<211> 531
<212> DNA
<213> Homo sapien

<400> 93
gagaacttgg cttttattgt gggcccaggg nngcacaag ntcaggaggg ccaaggggag 60
gatctggttt tctggctagc caggctatag catggglate nttaggaatc cgtctgtagt 120
gcaacagcct caattgctgc agttccgggg agaacacctg cactgcatgg ctttgatgac 180
ctgctgttac acgacagaga cattggtgca gtgcaagggc accgcctatg gctccgtcct 240
cgagggcagg cagcaggaga attgctcttc cacatcctcg atgctccttg agtacacaga 300
tttgctggca ccttttccct ggcagctatg aatgtccctt tctcttggg acttacaaln 360
tcccctttt atgtactgca ccttggctgt gatgctttt caatcaggct cctcacctgt 420

```
gtcaacagcag gtguckggan ttttcaagat ttgcccctct tcagcncagc acttgknttc 480
atcaantggt gggcagcccg tgacccctct ctccagatg tactctctc t 531
```

```
<210> 94
<211> 531
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(531)
<223> n = A, T, C or G
```

```
<400> 94
gcttgagct tgcggatca gtgcacacac gtgacttger kggcaaatgg ccagaccttg 60
ctgcagagtc atcgtgtcaa ttgtgacccat ggaccccgcc cttcatgtgc caacagccag 120
tctctgttcc ggggtggagga gantgtgtgc tgcgctgga cctgcccctg tgtgtgcaag 180
ggcagttcaa ctggcccat cgtcaccttc galungcaga atttcacgct tactggtagc 240
tgtctctatg tcatctttca aaacaaggag caggaccttg cagtgtctct ccacaaaggg 300
gcttgacgac ccggggcaca acacggtctc atgaaglcac ttgagattaa qcatgctggc 360
gtctgtgctg agctgtgccc taacatggag acggtcagtg atggcagact ggtccttgcc 420
ccgtacgttg gtgaaaacat ggaagtcagc atccacggcg ctatcatgta tgaaglcagg 480
tttaccatc ttggcccatc ctccacatcc accgcacaaa aacaacgagc t 531
```

```
<210> 95
<211> 605
<212> DNA
<213> Homo sapien
```

```
<400> 95
agatcaaacct ctgctggtca ggagggaatgc cttccttgtc ttggatcttt gctttgaagt 60
tctcgatagt rwcaactkkr yteramskma ngkgyratgr wmttksywqw rasytkmwwm 120
rsgraraytt agacaycccm cclhwagagc gsagkacmar gtgcagaggt ggacLctttc 180
tggtgtgtgt agltcagcag ggtggtgtca tcttccagct gtttcccaga aaagatcanc 240
ctctctctat caggagggat gccttccctt lcttggtatc ttgccttgac attctcgatg 300
gtgtcaactgg gctccacctc gagggtgahg ttcttaccag kcaaggtctt cacyaagaty 360
tgcctcccac ctctgagagc gggacgcccq tgcaggglrn actctttctg galgkntag 420
tcagacaggy tgcgycclh ttccagctgc ttccacagca aagatcaacc tctctgtgtc 480
aggaggrahg ccttcttct cytggtatct tgcyytgacr ttctcratgg tgctacctgg 540
ctccacttcg agagtgtatg tcttaccagl cagggtcttc accagatctt gcattccacc 600
tctaa 605
```

```
<210> 96
<211> 531
<212> DNA
<213> Homo sapien
```

```
<400> 96
aagtcncaaa cagacaagga ttattacacg ctgcaagclw tattagaagc tgaacgagga 60
gacagaggtc atgaltctga gatgatttga gacnttmaag ctogaattac atctttacaa 120
gaggaggtga cgcattctca acataatctc gannagttgg aaggagagag aaaaagaggt 180
caagacatgc ttaatcactc agaaaaggaa caagataatt luyagatnga tttaaactac 240
aaacttanat cattacaaca acggttagaa caagaggtan atgacacaaa agtaaccaaa 300
gctcgtttaa ctgacaaaca tcaatctatt gaagagagaa ngctctgtgc atgtgtgtg 360
atggaaaaaa agctgagaga agaaagagaa gclungaga aggttgaaaa luyggttgtt 420
```

```

engattgaga aacagtgttc catgctagac gbtgatctga aagcaatctca gcagaaacct 480
gaacatttga ctggaaataa agaaaggatg gaggatgag ttaagaatct a 531

```

```

<210> 97
<211> 1017
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1) ... (1017)
<223> n = A, T, C or G

```

```

<400> 97
agctccacac atgtccatca gggtagccca gaagtccac aaggtagtcca cctctggccc 60
ccgggccttc agcagccgct cctacacgag tgggcccgtt lcccccacaa gclctctgag 120
cttctcccca gtgggcagca gcaattttcg cggtagccca ggcgggggct ctggtggggc 180
cagcgggctg qggggcctca ccgagttac ggtcaaccag agcctgctga gccccttct 240
cttgagggtg gcccccaaca tccaggccgt gttcaaccag gagaagagac agatcaagac 300
cctcaacaac aagtttgcct cttccataga caaggtacgg tccctggagc agcagaaaca 360
gatgctggag aaccaagtga gctccctgca gcagcagagc accgctcgaa gcaacatgga 420
caacclgttc qgggctacca tcaacaccc tagnuggcag ctggagacac tgggcccagg 480
gaagctgaag ctggaggcgg agcttgagca catgcagggg ctggtggagg acttcaaggc 540
caagtatgag gatgagatca ataacgctac agagatggag aacgaatttg lccctatcaa 600
gaaggatglt gctgaagctt acatgaacaa ggtagagctg gagtctcgcc tgggaaggct 660
gacgcagcag atcaacttcc tcaggcagct gtatgaagag ggaatccggg agctgcagtc 720
ccagatctcg gacacatctg tgggtgctgc catggacacc agccgctccc tggacatgga 780
ccgctcatt gctgaggcca aggcacagta caggatatt gccaaaccga gcggggtga 840
ggctgagagc atgtaccagg tcaagtalga ggagctgag agcctggctg ggaagcagc 900
ggatgacctg aggcagacaa agctgagat ctctgagatg aaccgggaac atcagcagc 960
cttcaggtct gattgaggg cctcaaggc cagagcgctt acctggagac cggccat 1017

```

```

<210> 98
<211> 561
<212> DNA
<213> Homo sapien

```

```

<400> 98
cccggaagca gcaaacgagc ggaataatgg agacattttc tgcctccatg atggtttatc 60
tgggtctgga aaccccaaac ctcaaggatg gcttggcgca tgggggaaac agcctgctgg 120
ggcagggggc taccagggg cttcctatcc tggggcctac cccgggcagg caccccagg 180
ggcttatcct ggcagggcac ctccagggc ctacccctga gcacctggag cttatccagg 240
agcacctgca cctgggtctt aaccagggcc acccagggc cctggggcct acatctctc 300
tggagcggca agtgcacccg gaggctaccc tgcacctggc ccttatggcg cccctgctgg 360
gcaactgatt gtgccttata acctgccttt gcttggggga gtggctgctc gcatgctgat 420
aacaattctg ggcacgggtg agcccaattc aacagaaatl gtttttagatt tccaaagagg 480
gaatgatgtt gcltccact ttaacccnag cttcaalagc aacaacagga ggtgclctgg 540
ttgcactaun aagctggata a 561

```

```

<210> 99
<211> 636
<212> DNA
<213> Homo sapien

```

```

<400> 99

```


gggaatgcna	caactttat	gamaagaaag	tgcactgaaa	tttgttgaaa	ccttaaaag	60
ggnaacttag	acaccccccc	tcragccmag	haccarginc	araggfagac	tctttctaga	120
tgttgtagcc	agacagggtt	cgwccatctt	ccagctgttt	ycerqcaaag	atcaacctct	180
gcbhateagg	aggratgcct	tctttatctt	ggatctttgc	cttgacattc	ccgatcgtgt	240
caatgggtct	caactcgagg	qtgatgggtc	haccagtcag	qgtcttcacg	aaatytgca	300
tccacctct	gagagagagc	accaggtgca	gggttgactc	ttcttggatg	ttgtagtca	360
acaggggtgc	yccatcttcc	agctgctctc	csagcnaaga	tcaactcttg	ctggctcaaga	420
qgratgcctt	ccttgtcttg	gatctttgcy	ttgactttct	caatgggtgc	actcgggtcc	480
acttcgagag	tgatggtctt	ccagtcagg	gtcttcacga	agatctgcct	ccacctctta	540
agacggagca	ccaggtgcag	ggtggactct	ttctggatgg	ttgtagtca	acaggggtgc	600
tccatcttcc	agctgtttcc	cagcnaagat	caacct			636

<210> 100

<211> 697

<212> DNA

<213> Homo sapien

<400> 100

aggttgatct	ttgclgggaa	acagctggaa	galhgacgca	ccttgtctga	ctacacacat	60
ccagcaagag	tccacctgc	acctgggtgc	cctctttaga	qgtgggatgc	aatctctcgt	120
uagacacctg	actggtaaga	ccalcactct	cgaagtgag	ccagtgagca	ccattgagaa	180
ygtcaargca	agagctcaag	acaggaaggg	calyccctct	gacccgcaga	ggttgclctt	240
cgctsggaaa	gcagctggaa	gatggggcca	ccttgtctga	ctccacatc	caaaacaggt	300
cyacctgca	cctgggtgct	cgtctcagag	gtgggagcca	ratcttctgt	aagacctga	360
ctggtaagac	cattacccctc	qaggtggagc	ccagtgcac	calccagant	gtcaaggcaa	420
agctcccaag	taagggaagg	atccctctct	alcagcagag	gttgatcttt	gctgggcaac	480
agctggaaga	tggacgcacc	ctgtctgact	ccaacatcca	gaaagagtc	acctytgca	540
ytggtmctbc	gtctyagagg	kgggttgcaa	atctwmqtkw	agacacchac	tkkyaagzyy	600
atcamcmwtg	akktcpakys	cactkwact	wtcrakaamg	tyrwwgcawa	gatecmagac	660
aagggaagca	ttctctctga	ccagcagagg	tcatct			697

<210> 101

<211> 451

<212> DNA

<213> Homo sapien

<400> 101

atggaghtct	actctgtcga	ccaggtctga	gcctgtgtgt	qcgatatcgg	ctcaclgna	60
lctccacttc	ctgggttcaa	gcgacccctc	tgcctcagcc	tcccgagtag	clgggactcc	120
aggaagggt	cacataatt	lclglatttt	tagtagagac	atggttlngc	catgttggct	180
gggtgtgtct	cgaactctct	actcaagtg	atcggccttg	gcclcccaga	gtgttgggat	240
tacaggcgaa	agccaaagct	ccggccaggg	gaacaacttt	agantgaagg	aatatgcga	300
aaqaacatca	catcaaggat	caattaattc	ccatctatca	attactatat	ghgggtcatt	360
atgaactattt	cccaagcacl	clacgttgac	tgtclgagaa	gatgttclgc	ctgcattggt	420
gagagtggag	aaaggccagg	attottaggt	t			451

<210> 102

<211> 571

<212> DNA

<213> Homo sapien

<400> 102

agcgcggtct	tcggggcgca	gaangctgaa	ggtgatcttg	ccgcctcga	ccgacgcac	60
cagctcgttg	aggaagggtt	ggacagggtc	caqnaagac	tggccaggcc	cctgcagaag	120
ctggaggggg	cagaaaaagc	tgcagatgag	agtgcagag	gaatgaaggt	galagcaaac	180

cgggccatga	aggatgagga	gagcatggag	attcaggaga	tgcagotcaa	agcggccaag	240
cacattgcga	agagagctga	cgcacaatac	gaggaagtag	ctcgtaagct	ggtcactctg	300
gagggtaggc	tggagagggc	agaggagcgt	gcggaggtgt	ctgsactaaa	atgtggtgac	360
ctggaagaag	aactcaagaa	tgttactaac	aatctgaaat	ctctggaggc	tgcactctga	420
aaatattctg	aaagggagga	caaatatgaa	gaagaatta	aacttctgtc	lgaacaaactg	480
aaagaggtct	agacccgtgc	tgaatttgca	gagagaaagg	ttgcaaaaat	ggaaaagaca	540
attgatgacc	tggagagaaa	acttgcccaag	c			571

<210> 103

<211> 451

<212> DNA

<213> Homo sapien

<400> 103

gtgcacagg	ccatttat	gagaaata	ataataatta	caatgatga	tagctcttct	60
taaattaca	aacagaaac	acaaagaag	aagaggaaga	acccagggc	ttccaggggt	120
gagcctgac	cctcctcct	gccacctcc	caatctcatt	agtgtccttg	gagggggcag	180
aggactcag	gggagctcag	ctcaggggc	cctgggctga	agcgggagag	gacagagagtc	240
ctgagggcac	agagctgggc	aacctgagcc	gcctctcttg	ccccctccc	cacctctgcc	300
caaacctgct	tacagcact	tgcacctcc	caatctaac	cgtccatcca	ctctgagctt	360
cccgagcag	tgggtgagc	agggctcagc	caatctctg	ggcgggggct	tgggtgagca	420
aggacagtc	ccagaggtga	tatcagggcc	t			451

<210> 104

<211> 441

<212> DNA

<213> Homo sapien

<400> 104

gcagggagct	ggtctgctca	cacttgctgg	cttgcgcctc	aggactgggt	ttatctctctg	60
actcagctg	caaaagctga	ctctgagga	gttaagtcog	tcccagagcc	ttggaatcct	120
acggccccc	cagccggatc	cctcagcct	tccaggtcct	caactccctg	ggagctgag	180
caatggcctc	catggggcta	caggtaatgg	gcategcgct	ggcagctctg	ggtctgcttg	240
cgtcatgct	gtgctgcgcg	ctgcccattg	ggcgggagac	ggccttcctc	ggcagcaaca	300
ctgctcctc	gcagaccatc	tgggaggggc	tatggatgaa	ctggttggtg	cagagcaccg	360
gcagatgca	gtgcaagctg	lactagctcc	tgttggaact	gcgcagggac	ctgagggcgg	420
cccgccctct	cgctcctc	a				441

<210> 105

<211> 509

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (509)

<223> n = A, T, C or G

<400> 105

tgcaaaagg	acacaggggt	tcaaaaataa	caatttctct	tcccctccc	caaacctgta	60
ccccagctcc	agagcaacaa	cccccttct	ccccggggga	aagcaagag	gagcaggtgt	120
ggcatctgca	gctgggaaga	gagagggcgg	ggaggtgctg	agctcagctg	tgtctcttt	180
ccaaatataa	atactgtgtg	cagaactgga	aaatctctca	gcacccacca	ccccagcact	240
ctccgttttc	tgcgggtgtt	tggagagggc	cggggggcag	ggcgccaggg	cacgggtggg	300
ctgcggtctc	ctgcatccgc	tgggtgtgca	ccccggagag	ctctgtctgc	tcatgttaga	360

agagatgaca	ctcgggggla	ccccggatgg	tgggggctcc	ctggatcaga	ttccccgtgt	420
tgggggtcac	acaccagcac	tccccacgt	ccccgttcag	agacatcttg	cactgtlctg	480
ggttgtacag	gccatgcttg	tcacaghtg				509

<210> 106

<211> 571

<212> DNA

<213> Homo sapien

<400> 106

gggttgagag	gactgggttct	ttatttcaaa	nagacaacttg	hcaatattca	gtatcaaaac	60
agttgcacta	ttgattttct	tttctcccaa	tgggccccaa	agagaccaca	lcaaaaggaga	120
gtacatttta	agccaataag	ctgcaggatg	tacacctaac	agacctctta	gaaacottac	180
cagaaaatgg	ggactgggla	gggaaggaaa	cttaaaagat	caacaaactg	ccagcccaag	240
gactgcagag	gctgtccacg	ccgatggggg	tggccaggtt	gcacaaacc	caaaagcnaag	300
tttcaaaata	atataaaatt	taaaaagtgt	tgtacctcag	ctattcaaga	tttctccagc	360
actgtctgat	acaaagcaca	attgagatgg	caattctaga	gcacacagct	tcaaacccag	420
aaaagggtga	tgaatgttgt	ttaccatggc	taaatcagtg	gcnaaaacac	agtcctcttt	480
ctttctttct	ttcaaggagg	caggaaagca	attaaghtgt	caactcaaca	lcaagggggac	540
atgatccatt	ctgtcaagcag	ttgtgaaggg				571

<210> 107

<211> 555

<212> DNA

<213> Homo sapien

<400> 107

caggaacccg	agccgagaca	gtactgttgt	gggcaccatg	gctgggatca	ccaccatcga	60
ggcgggtgag	cgcagatccc	aggttctgca	gcagcagaca	gatgatgcag	aggagcgagc	120
tgagcgcttc	cagcgagagc	ttgagggaga	aaagcgggac	cgggaacccc	ctggagctga	180
ggtggccttc	lctgaacgta	ggatccagct	gnttgaagaa	gagclggacc	gtgctcagga	240
gcgcctggcc	actgccttgc	aaaagcttga	agaagctgaa	aaaactgctg	atgagagtga	300
gagaggtatg	aaggtttatt	aaaacccggc	cttaaaagct	gaagaaaaga	tggaaactca	360
ggaaatccaa	ctcaaaagag	ctaagcacat	tgcaagagag	gcagataggc	agtatgaaga	420
ggtggctcgt	aagtttgtga	tcattgaagg	aaacttggaa	cgcacagccc	aaagagctga	480
gclggcagag	lctgaactga	gagcgatggc	ctagcagatt	agactgcttg	ccccgaacct	540
gaagtgctct	agtgcc					555

<210> 108

<211> 541

<212> DNA

<213> Homo sapien

<400> 108

atctacgtca	tcaatcaggc	tggagacacc	atgttccatc	gagctaagct	gtccaatatt	60
ggctttccag	aggtcttggc	ggactatgat	lcaactgtct	ttgtgttcag	lcatgaggag	120
ctcattccga	lcaagagacc	taalgtctac	aggtgttttt	cgcagccacg	gcacatttct	180
gttgcaacgg	acaagttcgg	gtttagcctg	ccatatgllc	agtatttttg	aggtgtctct	240
gctctcagta	aacaacagtt	tcttgccatc	aatggattcc	ctaataatta	tlgggggttg	300
ggaggagag	atgacgacat	ttttaacaga	lcaattcata	aaggcaatgc	tatatccact	360
ccaaatgctg	tatgtaggag	gtgtcgaatg	atccggcatt	caagagacaa	gaaaaatgag	420
cccaatccct	agaggtttga	ccgggtctcca	catacaagag	aaacgatggc	cttcgatggt	480
ttgaactcac	ttacctccan	gtgtgttgat	gtcagagata	ccctttatat	acccaaatca	540
c						541

<210> 109
 <211> 411
 <212> DNA
 <213> Homo sapien

<400> 109
 ctatgacctct aattaaaagg ccaatcatg ctggggaatg aacagctctg ccccgagggc 60
 cacagcgaat tcttagggan gaggcaaga gttgagaagg gaaaggaaag aaggaaaggaa 120
 ggagaaacat aagaactgga gacgttgggt gggtcagggg gtgtggtgga ggtcggaga 180
 gatggtaaac aaacctgact gcatatggtt ttcaactcca tagtctaggg ccctgagggc 240
 gtcagttctt ggtgggctgag ggtccttcca cccagccac ctgggggagt ggagtgaggg 300
 gttctgccaq gtatgcagat gttgtctcct aagttcctga cccagatgtc tggcaggata 360
 acgtgacctt gttcctcca cagggacct gaaagtaatt ttgctcttla c 411

<210> 110
 <211> 451
 <212> DNA
 <213> Homo sapien

<400> 110
 ccgattcaa ggtcacaaga tccytccctt aactcaaat caalkgqba ccaatggtaa 60
 tgaacctacg agtacacaga ctacggggcg actaatcttc aactcctaca tacttccccc 120
 attattccta gaaccaggcg aactgggact ccttgacglt ncaatcgag tagtactccc 180
 gattgaagcc ccccttcgtc tntaatatc atcaagagac gtcttgcacl catgagctgt 240
 cccacattta ggttaaaaa cagatgcaal tccgggagct ctanugcann ccaatttcac 300
 cgtacaacga cggggggtat actacggfca atgtctctga atctgtggag caaacccacg 360
 ttctatgccc atgllccclag aattaattcc cctaaaaac tttgaatatg ggacactatt 420
 laacctctag cccccctctt acccccttta g 451

<210> 111
 <211> 541
 <212> DNA
 <213> Homo sapien

<400> 111
 gctcttccaa cttttattgt taattctctt cactlqqcng atacagagcl gkqgatttga 60
 agccacccac tgaccaggaa atgcaacttl tccaaaatca tccccccttt tcatgattgg 120
 aacagttttc ctgacggctc gggaggtttg aagggtganc aqccatttg cacttgcaaa 180
 aaagygagtg ccccaaggcc tcaaccacac ctcccagagc taccatggg clgcaqntga 240
 cltggccaggt ttgggggttcg tgagctttcc llnctgctgc ggtgggggng cctcangaa 300
 ctgagaggcc ggggtatgct tcatgagtgk tncatttac gggacanaag cgcacatta 360
 ggataaggaa cagccacagc acttcatgct tgtgagggtt agctgtagga gcggtgaaa 420
 ggatlcacgt ttatgannat cttaagcaaa caacggtttt tagctgggtg nzaaacagga 480
 aaactgtgat gtggccaat gaccaccaal tttctgccc tglgaaagtc cccatgaac 540
 c 541

<210> 112
 <211> 521
 <212> DNA
 <213> Homo sapien

<400> 112
 caagcgcctg gcgtttggac ccagttcagk gaggttcttg ygllttgtgc ctttggggat 60
 ttigtattga cccgggggtc agcctttaga aggtcttccg gaggagggcg agttccctt 120
 cagtaccacc cctctctccc cactllccct ctcccggcaa catctctggg aatcacacg 180

atattgacac	gttgagagcg	agcctgaaca	tgcacctcgg	ccccagcaca	tggaaaaacc	240
ccttccttgc	ctaaggtgtc	tgagttctct	gctcttnagg	catttccaga	cttgaatttc	300
tcatcagtec	attgctcttg	agtctttgca	gagaaacctc	gatkagggtc	acctgggaga	360
aagantttgt	ccccattac	agatctatct	cttcctcttg	gaagggcagg	gaatggggac	420
ggtgtatgga	ggggaaggga	tctcctgcgc	ccttcattgc	cacacttgyt	gggacctgta	480
acatctttag	tgtctgagct	tctcaattta	ctgcactagg	a		521

<210> 113

<211> 568

<212> DNA

<213> Homo sapien

<400> 113

agcgtcaaat	cagaatggaa	aagactcaaa	accatcatca	acaccaagat	caaaaagaca	60
agratccttc	aagaaacagg	aaaaaacctc	taaaaaccca	aaaggacctc	gttctgtaga	120
agacatttca	gcnaaaatgc	nagcaagtat	agaaaaaggt	ggttctcttc	ccaaagtggg	180
agccaaattc	atcaattatg	tgaagaattg	cttcaggatg	actgaccaag	aggclactca	240
agatctctgg	cagtggaggga	agtctcttla	agaaaatagt	ttaaacaatt	tgttcaaaaa	300
tttlaaggtct	tatttccctt	ctgtaacagt	tgtatctctg	ctgtctcttl	tataatgcag	360
agtggagaat	ttcctacccg	tgtttgataa	algtttgtcc	ggttctcttt	ccaaagaatt	420
gttgtccaaa	atgctctgtt	agttttttaa	gatggaaact	ccccctttgc	ctggtttctaa	480
gtatgtatgy	atgttllatga	ctggccatag	tagtagaggt	ggtcagacat	ggaaatggtg	540
gggmgacana	aatatacatg	tgaataaa				568

<210> 114

<211> 483

<212> DNA

<213> Homo sapien

<400> 114

tcaggattcc	anagcattta	tggccaaaacg	attcctttta	gaggattact	tttctcaatt	60
tgggttttag	taattctagc	tttgcctgta	aaagatacaa	cgatggaltt	taantactgc	120
ttgtggaatg	tgtttaaagg	attgattctc	gaacctttgt	atatttgata	gtattttctaa	180
ctttcaattc	tttctctttt	gccttttaag	ttcatgltct	gcctatgcaat	cgttttatatg	240
caagttttct	taattttttt	agatttttct	ggaltgtatg	tttaaacaa	aaaaagctctc	300
tttaaaactg	tagcagtagt	ttacagttct	agcaaaagagg	aaagtllgltg	ggttaaacct	360
tgtattttct	ttcttllatga	ggcttctctaa	aaaggtattt	tatgtgttct	ttttaacaaa	420
lattgtgtac	aacctttana	acatcaatgt	ttggatctaaa	acaagaccca	gcttatttttc	480
tgc						483

<210> 115

<211> 521

<212> DNA

<213> Homo sapien

<400> 115

tgtggtggcg	cgggctgagg	tggaggccca	ggactctgac	ccctgacctg	ccttcagcaa	60
ggcccccggc	agcgcgggac	actacgaact	gcctgtgggt	gaaaaatata	ggccagttaa	120
gctgaattga	atgtctggga	atgaaacac	cgtgagcagg	ctagaggtct	ttgcnaaggga	180
aggaatagt	cccaacatca	tcaattgggg	ccttcacagg	accggcaagg	ccccanagcat	240
tctgtccttg	gcctggggcc	tgtctgggcc	agcaactcaa	gatkccatgt	tggaaactcaa	300
tqcttcaaat	gacaggggca	ttgacgttgt	gagggaataa	attcaaatgt	ttgctcaaca	360
aaaagtcact	cttcccaaa	gocgacatca	gatcatcaat	ctggatgaag	cagacagcat	420
gacogacgga	gcnaagcaag	ccttgagggg	aacctaggaa	atctactota	aaacctctcg	480
ttgcaccttg	cttctaatgc	ttcggaatag	atcaatagag	a		521

<210> 116
 <211> 501
 <212> DNA
 <213> Homo sapien

<400> 116
 ctttgcacaaag cttttatttc atgtctgccc catggaatcc acctgcacat ggcattcttag 60
 ctgtgaagga gaaagcagtg caccgagagg aatgagtggc cggaaacccc ggctctccca 120
 agctgccttc cagcagcccg ccagggccat ggcagagaga gactgcaaac aaacacaagc 180
 aaacagagtc tcttcacagc tggagtctga aagctcatag tggcatgtgt gaattctgac 240
 aaattaaaag tgtgcatagt ccattacatg cataaaccnc taataatant cctgttlaca 300
 cgtgactgca gcaagccaggt ccagctccac cactgccttc ctgcacatc acatcaagtg 360
 ccattggtta gagggttttt catatgtact tcttttatlc tgtaaaaggc aacaaaatat 420
 acagacacaa accttccctt ttcaanncta atgttacaaa tctgtattat cacttggata 480
 taattagtat ataagctgat c 501

<210> 117
 <211> 451
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (451)
 <223> n = A, T, C or G

<400> 117
 caagggatat atgttgaggg tacryrytga caatgaacag ctccccaaagc acgagaaacn 60
 ttagttctct ccttccccag cgtctccttc gtctcccttg tttccgatg tccccaggt 120
 gagattginc cttaagtaact gaatgatcag agtctgkct ttataagcct ctteattcag 180
 cgtatccant tcagcaattg cttcatcaaa lgcctgtttt gccaggtac aggccttttc 240
 aggagagttt agaattctcat agtaaaagac tngaaattt agtmcagac caagacgaat 300
 tgggtgtgta ggetgcattt cltctctact aatttcaaxl gcttctgtgt aagcclgclg 360
 ggagttcgac ccaattggtt tgtttgttgc tccagatgcc acttcagaa gctacataaa 420
 ctantctctt ttcattttca aagtagaaca c 451

<210> 118
 <211> 501
 <212> DNA
 <213> Homo sapien

<400> 118
 tccggagccc gggtaqtccc cgcgcgcgcc gccgglycag ccactgcagg naccgcttgc 60
 ggcgcctgag tagtgggett aggaaggag agglcatctc gctcggagct tgcctcggaa 120
 ggtctcttgc tccctgcagc cctcccacgg gnatqacaat ggataaagc gagctggtac 180
 agaaagccaa actcgtctgag caggtctgagc nntatgatga latggtctga gccatgaagg 240
 cagtccagca acaggggccl gaaatctcca acgaagagag aantctgctc tctgttgccl 300
 acaagaatgt ggtcagggcc ccgcgccttc tccclgggt gtcattctca gctttgagc 360
 gaaaacagag aggaatgaga agcagcagca gatgggcaaa gactaccgla gnnagataga 420
 ggcagaaatg caggacatct gcaatgatgt lctggagctt gttggacaaa tatcttatto 480
 caatgetaca caaccagaa a 501

<210> 119
 <211> 391

<212> DNA

<213> Homo sapien

<400> 119

aaaaagcagc	argttcaacc	caaaatagaa	ctctcaaatg	tgggatagaa	caaaaccaag	60
tgtgtgaggg	qrgaagcaac	agcaaaagga	agaalqaga	tgttgcaana	aagatggagg	120
agggttcccc	tctctctggy	ggactgactc	aaacactgat	gtggcagtat	acacattcc	180
agagtcaggg	gtgttcattc	ttttttggga	gtacgaaaag	glggggatta	agagacgtt	240
tctggagggt	kaaggaccaa	ggctgggtc	tttccccct	ccccacccc	ttgatccct	300
ctctgatca	ggggaagga	gtctgcatga	gggaggtaga	gttgggaagg	gaagygatto	360
cattgacag	aatgggacag	autccctccc	a			391

<210> 120

<211> 421

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(421)

<223> n = A, T, C or G

<400> 120

tggcaatagc	acagccalcc	aggagctctt	cargcgcate	tgggagcagl	tcactgccat	60
gttccggagg	aggcccttcc	tccactggta	cacagccgag	ggcatggagg	agatggagtt	120
acccgagggt	gagagcaaca	tgaacgaccl	ctctctgag	tafcaagcag	taccaggatg	180
ccaccgcaga	agaggaggag	gattlqntg	aggaggccga	aggaggagcc	taagycagag	240
cccccatcac	ctcagglllc	ctagcttccct	tagccgcttt	actcaactgc	ccctttcctc	300
tccttcagaa	lctctqtttg	ctgcctctat	ctlqtttttt	gttttttttt	ctgggggggt	360
ctagaacant	gcctggcaca	tagtaggcgc	tcataaata	ctlqnttqnt	gaatgtctcc	420
t						421

<210> 121

<211> 206

<212> DNA

<213> Homo sapien

<400> 121

agctggcgcc	agggtccqnt	tgtgaaatac	agcglqntcc	gcctttgcgc	tcagtgtaga	60
aacmccgccc	tgttaaggtag	gttttggctc	ctctgctttt	ttclqaaata	cactaagagc	120
agcccccacaa	ctgtaacctc	aaggaaacaa	caaagcttgg	agtgccttaa	tttttaacca	180
gtttccaata	aaacqntttt	ctacct				206

<210> 122

<211> 131

<212> DNA

<213> Homo sapien

<400> 122

ggagatgaag	atgaggaagc	lgagtcagct	acgggcacgc	gggcagctga	agatgatqag	60
gatgacgatg	tgctagccaa	gaagcagaag	acgggcaggg	atgactagac	agcaaaaagc	120
gaaaagttaa	a					131

<210> 123

<211> 231

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(231)

<223> n = A, T, C or G

<400> 123

gatgaaaatt	aaataacttaa	attaastcaa	aggcaactacg	ataccaccta	aaacctactg	60
cctcagtggc	agtakqsta	kraagatcaa	gctacagAAC	atyatcta	atgaakqita	120
gcaattacat	akcargaage	atgtttgctt	tccagagac	tatggacaa	tqgtcaattwg	180
ggccccagag	gatatttggc	cnggaaagga	tcaagataga	tlaangttaa	g	231

<210> 124

<211> 521

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(521)

<223> n = A, T, C or G

<400> 124

gagtagcaac	gcaaaagcgt	tqqtattqag	tctgtgggag	acttcaggttc	cggtctctgc	60
agcagccgtg	atcgcttagt	ggagtgccta	gggtaglinn	ccaggatgcc	gaatatcaaa	120
atcttcagca	ggcagctccc	accaggactt	akctcaanaa	attgctgacc	gcctgggctt	180
ggagctaggg	gaggttqgtg	ctaaagaaatt	cagcaaccag	gagaccctgt	tqgaacttqg	240
tgaagtgta	cogtggagag	gatgtotaca	ttgttcagag	tgqntgtggc	gaaatcaatg	300
acaatttaat	ggagcttttg	atcatgatta	atgcchqaa	gattgcttca	gccagccggg	360
ttacttccgt	atctccatgc	ttcccttatg	ccccggcagg	ataagaaaga	tnagagccgg	420
gcgcacaate	tcagccnagc	ttqgtgcana	tatgtatctt	gtagcagtrc	ngatcatatt	480
atcaccatgg	acctacatgc	ttctcaaat	canggccttt	t		521

<210> 125

<211> 341

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(341)

<223> n = A, T, C or G

<400> 125

atgaaaaggg	ggccaaaggg	ggttcacaaa	taaaaatttc	tcttccttct	ccccaaaccl	60
gtacccccag	tccccagcca	caacccccct	cctccccggg	ggaaagcaag	aaagngcagg	120
tgtggcatct	gcagctggga	agagagaggg	cggggagggt	ccagagctgg	tgttggctct	180
tttccaaata	taataacgtg	tgtcagaact	ggaaattcct	ccagcaccca	ccaccccaagc	240
actctccgtt	ttctggccgt	gtttggagag	ggaggggggg	cagggggcgc	aggcaccggc	300
tggttggcgt	ctactgcata	cgttgggtgt	gtacccccgg	a		341

<210> 126

<211> 521

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(521)

<223> n = A,T,C or G

<400> 126

aggttggaqa	aygtcatgca	ggtgcagatt	glccaggakc	agccacaggg	tnaagcccaa	60
caggcccaga	gtggcaatgg	acagaccatg	caggtgatgc	agcagatcat	cactaacaca	120
ggagagatcc	agcagahccc	ggtgcagctg	aatgccgggc	agctgcagta	tatccgclla	180
gcccagcctg	tatcaggcac	tcaagttgtg	cagggacaga	tccagacact	tgcacccaat	240
gtcaacaga	ttacacagac	agaggtcccq	caaggatcgc	agcagttcaa	gccagttcac	300
aagatggaca	gcagclclac	cagatccagc	aagtcccat	gcctgcgggc	cangacctcg	360
ccagcccctg	ttcatccagt	caagcccaacc	aynccttona	cgggcaggcc	ccccaygtga	420
cgggcgactg	aagggcctga	gctggcaagg	ccaangacac	ccaacacaat	littgcacata	480
cagcccccag	gcacatggga	cagcatttct	tcccagauga	c		521

<210> 127

<211> 351

<212> DNA

<213> Homo sapien

<400> 127

tgagatttat	tgcatttcat	gcagcllqaa	gtccatgcac	aggrgaactag	cacagtittl	60
aatgccllla	aaacataaaa	gggaggtggg	cagcaaacac	acaaagtcct	aghtlccctg	120
gtccctggga	gaaaagagtg	tggcaatgaa	tccacccaat	ctccacaggg	ataaaatctg	180
tctattaat	gcaagaatg	ttccatggc	ctctggatgc	aaataccacg	agctctgggg	240
tcagagcaag	ggatggggag	aggaaccaag	gtgaaaaggc	agctacacac	attcaactaa	300
ttccatctga	gggcangaac	aacgtggcaa	gtcttggggg	tagcagctcl	c	351

<210> 128

<211> 521

<212> DNA

<213> Homo sapien

<400> 128

ttcagacatg	ctctctgcll	aggggggggg	caggaaacca	acctgctatg	ggaagcagaa	60
agagllhaag	gaaggtttcc	tttcatttct	gttctttctc	tittgctttt	gaacaghttt	120
laxatctnct	aatagctaa	tcatttgcca	gucagggtccc	ggtagaactt	agagaaacaag	180
gagcttgcta	agaattaatt	ttgctgttll	tcaccccatt	caaaagagag	tgcctgttcc	240
cctgatggag	ttccatllcl	gcagggggac	ggctgagtaa	cacgaaagca	ttcaagaaag	300
gggggtgtga	actcaatccc	accccatgga	cagacccctc	actcttctct	cttagcggcg	360
gcgclactta	ataaatatct	ttatactttg	aaatlctat	aacogatttt	lcccatgccc	420
cctctaaagg	gcacttgcca	gtctttatcc	ggacagttcaa	gcactgttgt	tggacaaacag	480
ataagggaaa	agaaaaagaa	gaazacaacc	gaaacttctg	t		521

<210> 129

<211> 521

<212> DNA

<213> Homo sapien

<400> 129

tgagcaggac	cactggcctg	gtcccccctc	atktgctgtc	gtaggaactg	acatgaaacg	60
------------	------------	------------	------------	------------	------------	----

cagatctagt	ggcagcagag	acgatgatga	ggacattctg	agacgllcgc	agcttcacga	120
agagcaatta	atgaagctta	actcaggcct	gagacagttg	atcttgaaag	agagagctgg	180
gaaagagagc	cgggaaaggt	catctcctgt	agccaglcgc	taagattctc	catcaactc	240
agcttcacat	attccatcat	ctcannctgc	atctctccct	ggctatggag	gaaatgggct	300
tcaccggcct	gtttctacgc	acttcgctca	gtataacagc	tatggggatg	tcagcggggg	360
agtcagagat	taccagacac	ttccagatcg	ccacatgccl	gcattgagaa	tggatcgggg	420
agtgtctatg	cccaacatgt	tgganccaaa	gatatlcaca	tatgaaatgc	tcattggtgac	480
caacagaggg	ccgaaaccaa	atctcagaga	ggctggacaga	a		521

<210> 130

<211> 270

<212> DNA

<213> Homo sapien

<400> 130

tcactttatt	ttctctgtat	acacacacctc	tgttgtagcc	acacgtggag	cctgagtcgg	60
ctgcacggag	actctggtgt	gggtcttgac	gaggtggcgc	ctggaactct	gacagggaga	120
cttggttaat	acagctctct	tcacagagtc	gggggllcag	tagctgtagg	tcctagacat	180
ggcatcaaaq	gtgaccltgg	cgaagttgcc	caggttgcca	gtgcagcccc	gggtctgggt	240
gtacagctca	tcgatacag	catctatgag				270

<210> 131

<211> 341

<212> DNA

<213> Homo sapien

<400> 131

ctggaatata	gacccgtgat	cgcacaaact	ttgaacgagg	ctgaccltgc	cacagtcctc	60
ccagccattc	gttctactct	atgagacaag	atgcclgat	gacagaatca	gcttttgtta	120
ttatgtataa	tgcctcclgc	atgtgtccat	gtcataactg	tcttcatacg	cttctgcact	180
ctgggggaag	aggagtacat	tcaacgggga	ttggcaacta	gtggctggga	gttctgcagg	240
aacacagtg	ccaggagagc	tggcaactac	ctttgtccct	tccttcattc	ttgtgagatg	300
ataaacctgg	gtccagctct	taataaaat	ataacagga	a		341

<210> 132

<211> 844

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(844)

<223> n = A, T, C or G

<400> 132

tgaatgggga	ggagctgacc	caggaaatgg	agcttgngga	gacacaggcct	gcagggggtg	60
gaaccttcca	gaagtgggca	ctgtgtgtgg	tgcctctlgg	gaaggagcag	aagtacacat	120
gcattglgga	acatygaggg	ctgcctgagc	ccclccacct	gagatggggc	agggaggagc	180
ctccttcacat	gcacagagac	aacacagtaa	tcatttctgt	tcgggttgct	cttggagctg	240
tgttcatctct	tggatctgkg	atggctttlg	ttatgagag	gaggagcaac	acaggtggaa	300
aaggagggga	ctatgctctg	gtccacaggt	cccagagctc	tgataltgt	ctccagagall	360
gtaaagtgtg	aagacagctg	ctggtgtgtg	acttggtgac	agacacgtgt	ttccacacctc	420
tcctgtgaca	tcagagagac	tcagttctct	ttagtcaggt	gtgtgatgtt	ccctgtgagt	480
ctgcgggctc	acaggtgaga	actgtggagc	ccagtcacac	ctgtcacacc	aggaccttat	540
ccctgcaatg	ccctgtgklc	cttccacag	ccacacctgc	tgctccagcc	aacatttggc	600

ggacatctgc	agcctgtcag	ctccatgcta	ccctgaacctt	canctctcca	cttccacact	660
gagaataata	atttgaatct	gggtggctgc	agagatggct	cagcctgac	tgctcttcca	720
aaggctctga	gttcaaatcc	cagcaaccac	atggtggctc	acaacacct	gtaatgggat	780
ctaataacct	cttctgcagt	gcttgaagac	acctacagtc	taattacata	taataataaa	840
taag						844

<210> 133

<211> 601

<212> DNA

<213> Homo sapien

<400> 133

ggcgggggcg	gcgcgcctcc	gcgcgcgcgc	cgcgngcgct	gccaglltat	naaggggagag	60
agcaagcagc	gagtccllga	gctctgtttg	ghcettigga	lncatttcca	tcgggtccclla	120
cagcgcctgc	tcagcctccn	gcagcccaag	tggtgaagca	gctcgagagc	aagactgctt	180
ttcagggaagc	cttggacgct	gcagglgait	aacttgcagt	agttgaette	lcagccacgt	240
ggtgiggggc	ttgcaaaatg	alcacgcctt	tccllccntt	ctctctcgaa	aagtattcca	300
acgtgatatt	cccllgaagta	natgtggatg	actgtcagga	tgllgcttca	gagtgtgaag	360
tcacatgcct	gcacacatto	cagtttttta	agaagggaca	aaaggtgggt	gaatttkclg	420
gagccnttaa	ggaaaagctt	gaagccaccc	ttaatgaatt	agtataatca	tgllttctga	480
aaatataacc	agccattggc	lctttaaaac	ttglactttt	tttaatttat	aaantataaa	540
aatatgaaga	calacacccn	gctgcatctt	gcttgacaat	aaacalclau	tgctaacact	600
l						601

<210> 134

<211> 421

<212> DNA

<213> Homo sapien

<400> 134

tcacataaga	aatttaagca	agttacrtca	tccllcaaaa	cacacgaat	gnccllctant	60
agagaaaccc	llccctccct	ccacctccct	ccccccacct	ctccclgaat	tnagaatcta	120
agagagagag	taaccataaa	accaaglllt	gtggaaatcca	lncatcagag	tgcttaacatg	180
gtgattaggt	taatatggcc	ctcllcccaaa	atttclattt	tnaaaaaaat	tataaccllga	240
attgcttatt	acacacacac	tcagtaacaa	agllccntat	attgaaaaal	qcttttccct	300
ccccllacac	cacccgttta	catatagcag	agcataarga	agagattgct	agctatagatg	360
gagcactctt	caaattacac	caagccgcac	agtggcllcl	ttccctccct	ctctccclaa	420
g						421

<210> 135

<211> 511

<212> DNA

<213> Homo sapien

<400> 135

gganaggatt	caagaattcag	aggaatttgc	tgcttccgaa	aaagacacct	clcgctgcct	60
gctgacagac	aaagagagag	agctggcgga	aataggggct	caatgcagc	acacactgaa	120
tgactatgaa	cagcltcttg	atgtanaagt	agccttgga	atggaaalca	gtgcttacag	180
gaactcttta	gagggcggaag	aagagaggtt	gaagctgtct	ccagggcctt	cttcccgctt	240
gacagllcln	ngagcatcc	caagtcgca	tgtaccgtac	aactagagga	aagcggaaag	300
gggttgcct	ggaagaatca	gagggcgagt	agtaglctta	gcctctctca	lcccgccctca	360
acacactgaa	atgtllcccl	gagcgaatt	galgttgatg	ggaatttcl	cccgcttgaa	420
gaacacttct	gaacgggctc	ccccaatggg	aagccttggg	agatgatcag	aaaaattgga	480
gacacatcag	taagttataa	atatacccca	a			511

<210> 136
 <211> 341
 <212> DNA
 <213> Homo sapien

<400> 136
 catgggttcc accaggttgg ccaggctgct cttaaacctac tgacclnagg tgatccacc 60
 gctcgggect cccaaagtgc tgggattaca qgcgtgagcc accacgcccg gcccccnnnn 120
 ctgttttttl tgtcttttagc glannngctct cctgccatgc agtatctaca taactqaagt 180
 gactgcacgc aagctcngtc acccctgtgt ctttttctct ttccagttcl tctctctctc 240
 ttcaagttct gctcagtgga aagctgcagg lccccagtta agtgalcagg tgagggttct 300
 ttgaacctgg ttctctnnnt cgnatttate cttcatgala g 341

<210> 137
 <211> 551
 <212> DNA
 <213> Homo sapien

<400> 137
 gatgttttg mcccccttgc tcaaaaaaaa cctccacaaag aatccccctgc tttattacaga 60
 agaagatgca ttttaannat qggttttttt caactttata lcttgaggaca agtatccatt 120
 aattattgtg ccagaagaga ttgaatacct gcttcaaggag cttaacagaag ctalgggggg 180
 aggttctggc caagaaacaa ttgaacattt lannatcaac ttgatgacn ntuaaaacgg 240
 cctttctgca cgggancttc ttgagcttat tggaaatgga cagtttagca aaggcatgga 300
 ccggcagact gtgtctatgg caattaatga agtctllnat gaccttatat tagatgtgtt 360
 aaagctgggt laccatgatga aaaaagggcca caagcggaaa aactggactg aaagatggtt 420
 tgtactaaa ccccaactaa tttcttaeta tgtgagtgag gactlqnnng ntaagaaagg 480
 agacattctc ttggatgaaa attgctgtgt agaagtctt gcttgacaaa agatggaaag 540
 aaggtgctll l 551

<210> 138
 <211> 531
 <212> DNA
 <213> Homo sapien.

<220>
 <221> misc_feature
 <222> (1)... (531)
 <223> n = A, T, C or G

<400> 138
 gactggttct ttatttcaaa aagacacttg tcaatatcca gtrtcanaac agttgcncta 60
 ttgatttctc tttctcccaa tgggccccaa agagacnnnn tanaaggaga gtacatttta 120
 agccanfaag ctgcagygat tacacctaac agacchucta gaacettac cagaaaatgg 180
 ggaactggtt qnngcqqnna cttaaaagel caacaaaactg ccagcccacg gcclgnaggg 240
 gctgtcacag ccagatgggg tggnnagggt gccacaaacc caaaguanag tttcaaatc 300
 atataaaatt taaaaagttt tqtacntaag ctattcaaga tttctccagc actgactgat 360
 acaaaagaca attgagatgg caattctaga gacagcaunt tcaaacccag azaaggttga 420
 tgaagtgagg tttccnnnlgg ctaaatcagt ynnannaca cagtctctt tcttctttt 480
 tttcaunnn qnaggnnngc aattaagtgg tcaacttaac ataagggggg c 531

<210> 139
 <211> 521
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(521)
 <223> n = A,T,C or G

<400> 139

tgggtgggca	ccatgggtgg	gatacccaac	atcgaggcgg	tgaagcgcaa	gatccaggtt	60
ctgcagcagc	aggcagatga	tgccagaggag	cgagutgagc	gcctccaggg	agaagttgag	120
qaaqaaagac	gqgcccqgga	acagggtgag	gctgagggtg	ccctcttgaa	ccgtaggala	180
cagctggttg	aagaagagct	ggaccgtgct	caggagcgcc	tqcccaactgc	cclycaaaag	240
ctggaaagaag	ctgaasaagc	tgcctgctgg	agtggagagc	gtatgaaggc	katggaaac	300
cgggccttaa	caatgagaga	aangattgaa	ctccaggaaa	tccaaclaaa	agaagctaaq	360
cacattgcag	aagaggcaga	taggaagtat	gaagagggtg	clagtaagct	ggtgatcatt	420
gaaggagact	tgaaccgca	cagaaggaaa	gagcttgagc	ttggcaaaag	tcnqllgac	480
cagagcttgg	atgaaccaga	llagactgat	ggacaaagac	c		521

<210> 140
 <211> 571
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc feature
 <222> (1)...(571)
 <223> n = A,T,C or G

<400> 140

agggggcgcg	ggtagctggg	ccactgggtg	acgacttag	actggccaga	ctctcagcac	60
ctggaaagcc	cccqagagtg	acagcgtgag	gctgggaagg	aggacttggc	ttgagcttgc	120
taaactctgc	tctgagcctc	cttgtegcct	gaatttagat	ggctccagca	aaqaaaggtg	180
gcgagaagaa	aaagggcgtg	tctgcaatca	acgaagtggc	accccgagaa	tacaccatca	240
acacttcaac	ggagcttgcg	ggagtgggtc	tcaagagagc	tgcacctogg	gcactcaaaq	300
agattcggaa	atttgccatg	caggagatgg	gaattccaga	tgtgcgcatt	gacacaaagg	360
tcaacaaagc	tgtctggggc	aaaggaataa	qantgtgccc	ataccgaalc	ctgtgtgcgg	420
ctgtccagaa	aacgtaatga	gaalgaagat	tcaaccataa	agctatatac	tttggttacc	480
laktgagctg	ttaccacttt	caaacatcta	cagacaglan	ntgtggatga	gaactaaacg	540
ctgactgtca	gatcaaatca	agttataaaa	t			571

<210> 141
 <211> 531
 <212> DNA
 <213> Homo sapien

<400> 141

tcggggagaca	caatttgccc	tattcctctc	caaagagcaa	gaacctcctt	ctctttggag	60
aatggggagc	cctcttgagg	acacagaggg	tltaaccttg	gatgacctct	agagaaallg	120
cccaagaagc	ccaccttctg	gtcccaacct	gcagacccca	cagcagtcag	ttgttccagg	180
cctgctgtag	aaggtcaact	ggctccattg	cctgcttcca	acaaatgggc	aggagaqaag	240
gccttctatt	ctggcccaac	caatccctct	gtaccagaaa	ctccgttttc	agtcagtgtt	300
gtccagcaac	ggtaaccgtt	acaaagtca	claaagacaa	ccatttcacc	tcctttgcaa	360
agctgttagc	cttagagtg	ttgcagtga	cactgtttac	acaccgtgaa	lataltccca	420
tcagtcactt	ccagttggca	ccagcctgaa	ccatttggta	actggtglla	actggaagtc	480
tgtttacaaq	gtggaglcgg	ggcttgclga	cttctcllca	tttgagggcc	c	531

<210> 142
 <211> 491
 <212> DNA
 <213> Homo sapien
 <220>
 <221> misc. feature
 <222> (1)...(491)
 <223> n = A,T,C or G

<400> 142
 acctagacag aaggtgggtg agggaggagt ggtaggaggg ttaggcaatt ccttggtagt 60
 ctgkctttaa aacctatggy aggaatcaga atgagggccc tactgagaga agtccccaga 120
 aactgctgac tgcattctgt aagagttaac agkknagagg tagaaglggt tttctgaatc 180
 agagtggaaag cgtctcaagg gtcccacagl ggaggtccct yagctaccto ccttcctgta 240
 gtgggaagag tgaagcccat gaagacctga gatgaagcaa ngatgggggt cctgggtctc 300
 aggaaggggc btgtctctct gcagcaggga gccctacagc tcaagaagaa agaatctatc 360
 atttgtttga agaaaccttg cccggatact agcggtaaac tggaggcggn gttgggggca 420
 caggaaagtg gaagtgtatt gatggagagg aggaagcct atgcnctgtg gccgagttca 480
 ctctctaaagl g

<210> 143
 <211> 515
 <212> DNA
 <213> Homo sapien

<400> 143
 ttaagcaat tgtaacaagt atatgkagat tagagtgagc aaaaakctatl acatttttca 60
 ttctcagllt claltctkcca aattgtttct taatgtctgt aatttactt aaaaattaac 120
 aaagcccaan atttatattt tgcaagaaa gccalcncta cattaatott acctttccac 180
 tcacgggccc atctccttcc tcttttccct aactatgcca ttaaaactgt tctactgggt 240
 cgggctgtg gctcalgcl glaktcccaq cattttggga ggcdaagga ggcggtcat 300
 gaggtcaggg gattgagacc atctggcca acatggtgaa aacccgccto gactaagaat 360
 acanuaatta gctgggcatg gtggcgcatg cctgl.ahet cagctactcg ggaggtgag 420
 gcagaagaat cgtttgaacc cgggagggag ahpatgaggt gagccccgat cgtgcccctg 480
 cactctagcc tggggtgagag aatgagactc tgctc

<210> 144
 <211> 340
 <212> DNA
 <213> Homo sapien

<400> 144
 tgtgccagtc tacaggccta tcagcagcga ctcttcagc aacagatggy ghucctgtt 60
 cagcccaacc ccalgagggc ccagcagcat atgctcccaa akungccca gtccccacac 120
 ctacagggcc agcagatccc taattctctc tccalcnag tgcgtctctc ccagcctgtc 180
 ctttctccac ggccacagtc ccagccccc cttccagtc cttccccaag gcttccgctt 240
 cagccttctc cacaccaggt ttcccccag acaagttccc cactctctgt acgtgtagtt 300
 gccagggcca accctctgga acaggggcat ttgcccagcc

<210> 145
 <211> 630
 <212> DNA
 <213> Homo sapien

<400> 145

tgtaaaaact	tgttttttaa	tttgtatata	atlaaaggtgg	cccatgcccc	gggggggtgt	60
aggaaatcca	agcagaccag	ctgggggtgg	gggatgtcag	ctacctgggg	ggatgtgtgt	120
tcttcnaaac	gggttgagaa	ggcctgtcag	gggcctaaat	cccacagaga	ggcctgggat	180
actcccccaa	cccgaggggc	agactgggca	gtgggggaac	cccalcgtgc	cccagaggtg	240
gccacaggcl	gaaggaaggg	cctgagggac	gtcagcctgc	aaagcccaag	gctgcagtcg	300
actaatttt	tacagaataa	aaggaacatg	gggatgggga	aaaaagcaac	aggtcaagca	360
gggcctggag	gccccagatc	caaggaaggg	caggacatag	gatgccagca	ccacctagc	420
agctcccaac	gttccctggg	caggagggcg	caagggattg	gcacaggccg	ctgttggcca	480
tcaccccaac	tttggaagac	ttgtcccgac	agaggtcagc	tcggaggggc	tctctgtggg	540
ccacactgt	aagaaacacg	atctccttgg	taatgacgta	caacggggcg	aggcaggggg	600
gacagggcac	gggaggtctc	agcgaacatt				630

<210> 146

<211> 521

<212> DNA

<213> Homo sapien

<400> 146

atnnetctct	ggttttgggt	gtaatanggg	ctgtggggca	taantctgaa	gccttgggga	60
cottgggtct	ggagagccac	gaagagggaa	ggaaagaggg	gcaagtccct	aaactaaaca	120
atgacclgal	ggattgtctg	accaagatag	agangtgaa	tcctgtgtct	tgcactccca	180
ccngactgga	gtttttgggt	ctgaatagag	ccagttgclg	aaaaattggg	ggtttggctg	240
agaaatctga	ttgtttgtgt	tattcaactg	gtgalittaa	aaataaacag	caacaaacaa	300
aaaaaccctg	actggctgtt	ttttccctgt	atcttttaca	actatlllll	gaactctcga	360
aaattattat	acttcaaccl	aaaggaagac	tgctgtgttt	gtggaatttt	tgtaattttt	420
taatttattt	tattctctct	cctttttatt	ttgcctgcag	aatccgttga	gagactaata	480
aggcttaata	tttaattgat	ttgtttaaca	tgtatataaa	t		521

<210> 147

<211> 562

<212> DNA

<213> Homo sapien

<400> 147

ggcatgcccag	gycactcggc	ggacgcaagg	gcagcgggga	gcacatggag	gactgcaggg	60
ggcgggttgg	gaacgggtcl	gaactgclgc	tgatagctcg	tgctttgggg	gatcgaggat	120
actcaccaga	aaacgaatat	gcccgaacaa	atcaatgclg	gaattaccac	catggatgca	180
gagctggagt	tgcaatcca	gccaataaca	actggaagac	agctctttga	tcaggtggta	240
aagactatcg	gcttcgggga	agtgtggtaa	lltqncctcc	actatgllgg	laalaaagga	300
tttcttcacl	ggctgaagcl	ggataggaag	gtgtctgccc	aggaggtcag	gaaggggaat	360
ccctccagt	tcaggttcgg	ggccaaagtt	ctaccctgaa	gatgtggtcg	aggagctcat	420
ccaggaatcc	accagaaac	ttttcttctt	tcaaglgagc	gaaggaatcc	ttagcgatga	480
gatctactgc	cccccttgag	actgcccgtg	tcclgggggc	ctacgcttgt	gcattgcaag	540
tttggggact	aaacggagga	ag				562

<210> 148

<211> 820

<212> DNA

<213> Homo sapien

<400> 148

gaaggaatcg	ggatctctag	catgagtcga	ccccaatctc	aaaggggcat	tcclggggag	60
gtctctggga	caatctctag	gtcactccca	tggaactctg	ltaaggtaca	actgaatgcl	120
gaaggaagag	aaacactgca	gaacgggcca	gaatctcaac	ccggcgatca	gtgatttgtt	180

lrrgggacttc	aagcgacaaa	ttggwagt	aatyyaaga	cgctatcat	gaacalcag	60
caaatctttt	gcgccaaagt	chgatgagac	gacnygaaga	atlnagncgc	atggayaaac	120
ttccaatna	agaaalcag	naacgtaaa	aatgcaatl	qnggcaagag	ynqaaacgac	180
ghayagagyn	ggaagagatg	atgattngt	aacgtgagat	ggaagaacaa	atgaggcgcc	240
aaagagagga	aagttacagc	egaaagggt	acatggatcc	acgggaaag	gacatgcgaa	300
tgggtggcgg	aggagcaatg	aacatgggag	atccctatgg	ttcaggaagc	cagaaatllc	360
caenclclag	aggtggtgt	ggcataggtt	atgaagctaa	lactggcgtt	ccacaaagca	420
aatgagtg	ttccatgatg	ggaagtgaan	tgcgtaclya	gcgctttggg	canqgaggtg	480
cggggcctgt	gggtggacag	gylctatag	gaatggggcc	tggaaactca	gcaggatag	540
gtagayggag	ayagagatc	qanngc				566

<210> 152

<211> 518

<212> DNA

<213> Homo sapien

<400> 152

ttcgtgaaga	cctgactgg	taagacal	actotcgaag	lqgggcoga	gtgacacac	60
tgaayhlyc	ayagcaayn	lcaagacaa	ggaagcctc	cctcctgacc	agcaagagtc	120
natctttgct	gggaacagc	tggagatgg	aynacccctg	tctgaclyc	aatccagaa	180
agagtccacc	ctgcacctgg	tgtccgllcl	cagaggtggg	algcannatct	tctggaagac	240
cctgactlyl	agagccalln	cctbunaggt	ggagccacgt	gacacccatcg	agaaiglcay	300
qycaagatc	caagataagg	aaggcatccc	tcclnatcag	cagaggttga	tctttgtctg	360
gaaacagctg	gaagatggac	gcaccctgtc	lqnetacaa	atccaynag	agccactct	420
gcacttggtc	ctgcgcttga	gggggggtgt	ctaagtttcc	cttttaagg	tttcaacaaa	480
lctccttqna	cttctctt	actaangttg	ttgcalic			518

<210> 153

<211> 542

<212> DNA

<213> Homo sapien

<400> 153

gcnggggtgc	gtgggcact	gggtgacoga	cttagyctgg	ccagactctc	agcaallgga	60
agggccocga	gagtgaacg	gtgaggtcgg	gagghaggac	ttggcttgag	chhgttagac	120
tctgctctga	gcctccttgt	cgctgcali	lqatggctc	ccggcaayag	gggtggcgag	180
aagaaaaag	gcgllclg	calcaayna	gtggtaaccc	aynaatccac	catcaacatt	240
caayagcay	tccatggagt	ggcttcaag	aagcgtccac	ctcgggcact	caayagall	300
cggaaatttg	ccatgaagga	gatgggaact	caaygtgtgc	gcattgacn	caagctcaac	360
aaagctgtct	gggccaaagg	aataaggaat	gtgcacatacc	gaaacaygt	ggggtgtcc	420
agaaacgla	atgagatga	ayattcaaca	aataagllct	atactttggt	tacctatgla	480
cctgttaaca	ctttcaaaaa	tctacagaca	glcaygtgtg	atgagaacly	atcgctgac	540
gt						542

<210> 154

<211> 411

<212> DNA

<213> Homo sapien

<400> 154

aatcttttat	ttaaatcaac	aaactcatcl	tcctcaagcc	ccagacatg	gtaggcagcc	60
ctccctctcc	atcccttcaac	cccacccctt	agccacagtg	ayngaatgg	aaatgagaa	120
gcaacgaggg	ccctctnag	ggaaggtgc	cccagatgla	hntgagcac	aglcaylca	180
gctgtggclg	gggcagcagc	lytcaagagc	tcclnuccl	aattaagtt	actgacgcca	240
cagclglgag	ngaagcatc	hntagaagc	aagggcaytc	cagcatcaga	aggcagaggc	300

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agcatcagtg actcccaggg ctggaatgaa cggaggaacac agagntcaga gacaggaacag 360
gccaggggga agaaaggaag acagaatagg ccaggggcag gagggtgaggg n 411

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<210> 155
<211> 421
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(421)
<223> n = A,T,C or G

```

```

<400> 155
lgaatgaatcl gggatgggctg gaagtagecc gagatgatgg gctcttctcl ggggatccca 60
actggttccc taagaantcc aaggagaacc ctcgggaactt ctgggatcac cagctgcaag 120
agggcaagaa cgtgatcggg ttacagatgg ccaccaaccg cggggggtct cangcaagga 180
tgaactggcta cgggatggca cgtgaagatcc tctgatccca ccccaggcct tgcacctgcc 240
ctcccaacga tngttaatat atatgtagat atalatttta gcagtgaal lcccagagag 300
cccagagct ctcaagctcc ttctgtcag gttggggggg tcaagctgt cctgtcacct 360
ctgaagtgcc tctgtgcate clctccccca tgettactaa tgcattccct tcccacagc 420
c 421

```

```

<210> 156
<211> 670
<212> DNA
<213> Homo sapien

```

```

<400> 156
agcggagctc cctccccctg tggctacacc caccacnccg caggctcagc calcagagag 60
aactccagcg actgggtaac cactgacahl cagggtgaagg tgcggggcac ctacctggt 120
acacaggttg tgggacagac aggtgttate cgcagtgtca cggggggcat gtgctctgtg 180
lacttgaagc acagtgaaga ngttgtcagc atttccaglc agcccttga gectatcacc 240
cccaccaaga acanccaggt gaaagtgate ctggggaggg atcgggaagc cacyggctc 300
ctactgagca ttgatggtg ggtatggcatt gtcctatgg accttgatga gcaagtacag 360
atctcacc cccgttctc ggggagntc ctggaagcct gaagtcagca gggccgggtg 420
actlctlgag atgaagagt atcctcttc ctcccttgc ccttggctgc gacacaagat 480
cctcctgag ggttagggcg attgttctg alctccttt qtttttctt claggttlcc 540
atcttttccc tccctggtgc tcattggaal ctggttagag tctggggag ngtcacnacc 600
ttctgtacc tccctccacc agcttgcctt tgtgtaccg lcttcaatn aaaagaagct 660
glttggclcl 670

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```

<210> 157
<211> 421
<212> DNA
<213> Homo sapien

```

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<400> 157
ggttcacagc actgctgctt gtgtgttgc ggagaggaat tccaggctca caaggctalc 60
ttagcagctc gttctccggt ttctagtgc atgtttgaac atgaalggg gggagagcna 120
aagaatcag ttgaatcna lgtgttggg cctgaagttt claggggact natgtgctc 180
atttcacagg gggagctcc aacccctggc aaatggctc atgatttct ggcagctgct 240
gacaggtatg cctggagcg cttaaggtc atgttggag atgcctctg cagtaacctg 300
tccttggag agcctgcaga attctctc ctggccgac tccacagtgc agatcagttg 360
aaaatcagc cagtggattt catcaactat catgcttcg atgtcttga gacctcttgc 420

```

g

421

<210> 158
 <211> 321
 <212> DNA
 <213> Homo sapien

<400> 158

tcttagccat	ttttctgctt	ctttggagaa	tgacgccacg	ctgactgctc	atttgtgttg	60
gttccatgcc	aattgggtgaa	alaggaaccc	atccggtagt	ggagccggag	ggacatcttg	120
tcctccacgg	tgtatgtgag	ntttggagca	taccagagct	tgggtgtctc	gccatacagg	180
gcaaaagaggt	tgtgacaaag	aggagagaca	cggcatgcc	gttcagccct	gafgacaggt	240
tctctgtctg	tgtactctcc	actgcccaga	cggagggggt	ccctgtccga	cagatagaag	300
atcaattcca	ccatagctt	g				321

<210> 159
 <211> 596
 <212> DNA
 <213> Homo sapien

<400> 159

tggcacactg	ctcttaagaa	actatgawga	tctgagactt	llttgtgtat	gtttttgaet	60
ctttttgaglg	qhaatnatat	gcctctttat	agatgtaaat	acctccttgc	acaaatggag	120
qgganttcac	tttcatcaat	gggagtgctc	ttagtgnta	aaaaccatgc	lqgtatctgg	180
cttcaagttg	taaaaatgaa	agtgaactta	aaagaaaata	ggggalggcc	caggatctcc	240
actgataaga	ctgtttttta	ghaaclhaag	gccttttggg	lctacaaqta	tatgtgaaaa	300
aaetqagact	tactqagttg	ggaaatccat	tgtttaaagg	tggctgtgtg	tgtgtgtgtg	360
tgtgtgtgtg	tgtgtgtgtg	ttttgttttt	caaggagagg	aatttattat	ttacagtlgc	420
ctgaatattac	tgkgtaaata	tatgtgtgal	atgattttgc	tytttgccma	ctaaatattag	480
gvctgtataa	gtactaactg	caatcttggg	tggtgatynl	ccagatatac	gatgatamcc	540
cttaaaattg	taaccygcct	ttttcccttt	gctylomatt	aaagtctatt	cmaaaq	596

<210> 160
 <211> 515
 <212> DNA
 <213> Homo sapien

<400> 160

gggggtannc	tctttattag	acggttattg	ctgtacacaa	gggtcagagc	gcagtgtaaq	60
cagtgtcaga	ggcccgccgt	cagcccaaga	atgttgattt	tctctcccta	llgalnaaag	120
tgggtgggtt	tcttcagaaa	agcccccagc	qongggacca	glgaqntccn	aggttagaag	180
tggaaclggg	agacttcagt	cccatgtctc	ttccacgcht	ccaggctggg	cagcaaggag	240
qanrtgccca	tgaactgcca	ggtctcccca	tclyacacca	gtgaagtctg	glagganagc	300
agccgcacgc	ctgcctctgc	caggagggcca	atcntggtag	gcagcattgc	aggatcagag	360
gtctgagtc	ggaaagaggc	cagggggaaq	tccctgcggg	gaagcacttc	tggccgaaq	420
acagclccal	lgaqcccctg	cagtacaggy	gtagtgcctt	ggaccaagcc	cacagcctgg	480
laungggccc	ctgcacaggg	cagggcacag	agggg			515

<210> 161
 <211> 936
 <212> DNA
 <213> Homo sapien

<400> 161

taattttctta	gtcgttttggc	atccclhaqc	atgcacaaagc	lltgaacaga	agggtccaca	60
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aaaggaaccag	gggttgtotta	lqqcatccag	ttanqccaga	gctgggaalg	cctctgggtc	120
atccacatca	ggagcagaag	caottgactt	gtcggtoctg	ctgccacggt	ttgggagccc	180
accagagccc	ggtcagccctc	gtccctccct	gcgcgcacgl	cttgaggcggc	caaggtctcc	240
aaaattgata	tccagctgag	acgttctatc	atttgcclgc	ttccggaaat	gattggtccat	300
aaccgaatct	tcagcatgag	ctctctcaac	ctttgcttta	tgaagaacaa	atccctctct	360
ccactgucac	tcaggagcctt	cattttggtt	tcggatatta	aattctactt	ttgcccgglc	420
cttattttga	atagccttcc	actcctccaa	gttcactctc	l.l.lggagccct	cctctctttac	480
ctcttcaact	tcattctcct	tattttcagc	gtctgccact	ggatgatgtt	cttctcactc	540
aggtgtttcc	tcagtcacal	l.lgattgata	caaglcagtt	aattcgtctt	l.gccagttcc	600
ccagtttgtg	gntccgctac	ctccacgttt	gtctctcgtc	ttcaggccag	atctatcact	660
tccactatgc	ctatcaaat	caagttttgc	acgagaatca	actccatctc	ctcagcccat	720
ccacagtcac	cggcccccctc	gactctctcc	aagacaccca	cgacctcgaa	l.ggttcggtc	780
ataatcgggt	ctatcaactg	aaaattcgcc	l.ccttcaacc	ttttctctca	gtggtctttc	840
gaattcttct	tcacgaggtg	gtcggctttc	tggctctcta	tcaattattt	tcctctccac	900
ctgaagttgt	tqatcaggtc	ttcttccaac	tcgttgc			936

<210> 162

<211> 950

<212> DNA

<213> Homo sapien

<400> 162

aagcggatgg	acctgagtc	gcgcaatcct	agcctctctc	cttgggcctg	ctctggtgtc	60
cgacatcagt	gacagacgga	agcagcagac	cattcaaggct	acgggagggc	cggggcgctt	120
gcggagcttg	agttttgctg	cctctccttc	cggcagctct	atgctgctt	tgtcttaaal	180
ggantcaga	ctgtggagac	gcgctggggt	cctctctctga	gcagccagcg	gaactctacc	240
atcgccgtcc	acattgctca	cagggacctg	gcggcagatg	cctgtcggga	gctgctggtg	300
gagagactcg	ggatgactcc	tgcl.cagtt	cagggccttgc	tcaggagggg	ggaaaagtct	360
ggctgagggg	tgatgagggg	gtcctttgac	attgggggaa	ctttgcaatg	cccggaagac	420
ttactcccg	atgaggttgt	ggactagaa	aactcaggtg	cactgaccac	cctgagcgag	480
aagtacctga	ctgtgatttc	aaaccccagg	tggltactgg	agcccatacc	tagggagggg	540
ggcaaggatg	tattccaggt	agacatccca	gcgacccctga	tccttttggg	gcctgaggtg	600
tgacaagtgt	gggttctclg	agggagctgt	corgagaaac	caagcl.cagtc	atggcactct	660
caatttgcac	tctgtaccca	gacctgtaca	aattaggtll	agatgaatt	tccactgctt	720
tggagagctc	cacccactaa	gcactgtgca	tglanacagg	ctccttctgt	cagatgaggg	780
aagttagggg	tggggttttc	cttgcclgcl	gcctccttag	gcacacaggg	actgtctcca	840
glacttttgc	cttagggtag	anggcaaaag	tgccaglaaa	tgtctcagca	ttgtgtctaa	900
ttttggtcct	gctagttctt	ggattgtaca	aal.cagctgtg	tgttagatga		950

<210> 163

<211> 475

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (475)

<223> n = A, T, C or G

<400> 163

tccagcggcc	gcccgggcag	gtgtcggagc	ccagccaggg	agggcctgctc	ttgtacttgt	60
tctccggctg	cccacltctc	tcccaclcca	cggcagctgc	gctgggtag	aagccttga	120
ccaggcaggt	caggctgacc	tgggtcttgg	tcactcctc	ccgggagcgg	ggcaggggtg	180
acactgtcg	ttctcggggc	l.gacttttg	ctttggagat	ggltttctcg	atgggggctg	240
ggaggggttt	gttggagggc	ttcacttgt	actccttgc	attcaaccag	tcctgggtga	300

ngacgggtgag	gacgcinnac	aacgggtacg	ngctngtgta	ctgcacccctc	cggggctttg	360
tcttgccatt	atgcacntcc	acggcgccca	cgtaccaatt	gaacttgacc	tcagggtctt	420
cgtggtcc	gtccacccac	acgcattgaa	cctcaaancl	ttggccggan	cacgc	475

<210> 164

<211> 476

<212> DNA

<213> Homo sapien

<400> 164

agcgtggtcg	cgcccgaggt	ctgaggttac	atgcglnrtg	gtggacgtga	gccacgaaga	60
ccctgaggtc	aaattccact	ggtacgtgga	cgccgtggag	gtgcacatg	ccaagacaaa	120
gcccgaggag	gagcagtaca	acagcacgl	ccgtgtggte	agcgtccctca	ccglactgca	180
unaggaclgg	ctgaatggca	aggagtcaca	gtgcacggte	tccacacaa	ccctccacgc	240
ccccatcgag	aaaaccctct	ccnagccca	agggcagccc	cgagaaacac	aggtgtacac	300
cctgcaccca	tcocgggagg	agatgaccca	naaccaggte	agctgacct	gcctggtcac	360
agcchlclat	ccragcgaca	tcgccccgtg	agtggggagg	caacggggag	ccggagaaac	420
actacaagac	caagcctccc	gtctgtgact	ccgcacccctg	ccgggcgggc	gtctga	476

<210> 165

<211> 256

<212> DNA

<213> Homo sapien

<220>

<221> misc. feature

<222> (1)... (256)

<223> n = A,T,C or G

<400> 165

agcgtggttn	cgcccgaggt	cccaacccag	gttgcaccc	ggalggcctc	aaagtctct	60
gcaactatgg	gacggglgag	acclgggtgt	accccaclca	ttccagtgtg	gccagagaag	120
actgtgtcat	cagcannaac	cccaaggaca	agaygcctgt	ctggttcggc	gagsgcatga	180
ccgatggatt	ccagttcgag	tatgggggac	aggtctccga	ccctgcggal	gtggggtgtg	240
ccgggcgggc	gtctga					256

<210> 166

<211> 332

<212> DNA

<213> Homo sapien

<400> 166

agcgtggtcg	cgcccgaggt	cangaacccc	gcaggaacct	gcogtgacct	caagatgtgc	60
cactctgaat	ggaagagtgg	agagtactgg	Alttaaccca	accaaggtcg	caacctggat	120
gccatcaaa	tcttctgcaa	catggagant	ggtgagacct	ggglgltccc	cactcagccc	180
aglgggggcc	agaaggaclg	glacalcagg	aagaaccccc	aggaacaggag	gcattgtctg	240
ctcggggagg	gcatgaccca	tgtattccag	ttcagatlah	ggggccaggg	ctccgacct	300
gcogatttgg	acctgcacgg	gcggcccgctc	ga			332

<210> 167

<211> 332

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature
 <222> (1) ... (332)
 <223> n = A, T, C or G

<400> 167
 tagagcgggc gcccgggcag gtccacatcg gcagggtcgg agccctggcc gccatactcg 60
 aactggaaac catcggtcat gtctctggcg aaccagacat gctcttggc ctgggggttc 120
 ttgtgatgt accagttctt ctggggcaca ctgggtcag tgggttacc gcaggtcttc 180
 ccantctcca tgttgcaaaa gactttgacg gcatacaggt tgcagccttg gttagggtca 240
 atccagtact ctccactctt ccaagacagag tggcaactct tgaggtcacg gcaggtggcg 300
 ccgggtgtct tgaactcgtt cgggaccacg ct. 332

<210> 168
 <211> 276
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (276)
 <223> n = A, T, C or G

<400> 168
 tagagcgggc gcccgggcag gtctctctca gaggcglacc tgtttattt gccctggcag 60
 cctccataga tnaagttatt gcangagttc cctctccagt caaaglacca gcgtgggaag 120
 gatgcacggc aaggcccaag gacttgcattt ggggtgcagt attcttcata gttagacata 180
 tggatggagt ggaattcaga atcttgcctt ctgggaagcc ttgggacaga ggaatccgt 240
 gaattcttgc tgggtgactt cggccgcgac caagt 276

<210> 169
 <211> 276
 <212> DNA
 <213> Homo sapien

<400> 169
 aaggtggtcg cggccgaggt ccaccagcag gaattgcagg gattctctcg tcccaagttc 60
 tccagaagg caggattctg aagaccatc cagcgatatg ttcacatag nagaatactg 120
 caccgcacac gcaattcactg ggccttgcgg tgcatacttc ccacgtcgtt actttgacgt 180
 ggaaggggnc tcttgcaata acttcacta tgggtgctgc cggggcaala aagaaagttc 240
 ccgtctcgag gaggacctgc ccgggcggcc gctcga 276

<210> 170
 <211> 332
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (332)
 <223> n = A, T, C or G

<400> 170
 tagagcgggc gcccgggcag gtccacatcg gcagggtcgg agccctggcc gccatactcg 60
 aactggaaac catcggtcat gtctctggcg aaccagacat gctcttggc ctgggggttc 120
 ttgtgatgt accagttctt ctggggcaca ctgggtcag tgggttacc gcaggtcttc 180

ccattctcca	lqhttcagaa	gactlllqgtg	gcattccaggl	tnccagccttg	attgggggtca	240
atccagtaact	otccactctt	ccagcccaaaa	tggcaatctet	tgaggtcaccg	gcangtgccg	300
gcgggggttct	tgacctcggc	cgccgaccacg	ct			332

<210> 171

<211> 333

<212> DNA

<213> Homo sapien

<400> 171

agcgtgggtcg	cgcccgaggt	ccagcaaaccc	cgcccgccccc	tgccttgacc	ccaagatgtg	60
ccactcttqtc	tqnaagagtg	gagagtactg	gacttaccccc	aaccaagggt	gcaccttggg	120
tgcctcaaaa	gtttctctga	acatggagac	lqgtgagacc	tgcgtgtccc	ccactcagtc	180
cagtgtggcc	cagaagaact	ggtacatccg	caagaacccc	ccaggaacaga	ggccttctctg	240
gcttcggcgag	agcatgccc	atggattcca	gttcagctar	ggcggccagg	gctccgaccc	300
tgcgatgtg	gacctgccc	ggcgcccgct	ccg			333

<210> 172

<211> 527

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(527)

<223> n = A, T, C or G

<400> 172

agcgtgggtcg	cgcccgaggt	cctgtcagag	ctgcaactgg	agaagctccc	ggacccctga	60
actgtcaagg	lcttctcttc	gttcccccag	gatgacatga	atgatgtac	tcagaagtgt	120
cctgnaatgg	ggcccatgan	atggttgnet	gagagagagc	ttcttgctct	acatctagcc	180
ggtatggtct	tggccatgc	cttatggggg	ctgcccgttc	ggcgggttqg	gtccgcctaa	240
aacctgtctc	cttccagctc	atcttcttcc	caacacttgg	cttctgacca	naagtgcacg	300
gagctgcat	acatttcca	gtgtcatacc	caggcttqgt	gacgaagggg	gtcttttgaa	360
ctgtggaagg	aacatccaag	atctctgntc	catgaagatt	ggggtgttgg	aggtttaccc	420
gttgggggaag	ctcgtctgtc	ttttcttccc	cttcaggggc	tcgtctctct	gaattattct	480
cagggcacatg	acataacttc	ctctcttqgt	tcccggcttc	agggccag		527

<210> 173

<211> 635

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(635)

<223> n = A, T, C or G

<400> 173

ccagagcgcc	gcgggggcaq	gtccaccaca	ccccattctt	tgtgtgtatc	atggcagccg	60
ccacttccca	ggattaccgg	ctacatcacc	aatatagaga	agcctgggtc	lcttctcttc	120
ccagtgggtcc	ctgggcccc	ccctgggtgc	ccagaggcta	ctattaclyy	cttqnaaccc	180
ggaaaccgaat	atacaattta	tgtccttqgc	ctgaagaata	atcagagagc	ccagcccttg	240
attggaaagg	ccagagccga	cgagcttccc	caactggtaa	cccttccaca	ccccaatctt	300
catggaccag	agctcttggg	tgctctctcc	acagltccaa	ccgccccttt	cgctcaccac	360

```

cctgggtatg acaactgaaa tggatttcag cttcctggca cttctgglea gcaaccacgt    420
gttgggcaac aatgatctt tggaaacat ggnlttaggc ggaacacccc ggcacacacg    480
ggcaccacca taaagcatag gcaagaaca taccogncga atgtaggaca agaagccctn    540
tctcacacan ncatctcatg ggccccatlc cangacactt ctgagtacat cacttcctgg    600
cctcctgggtg gcactgataa aaccccttac agtlaa                                635

```

<210> 174
 <211> 572
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(572)
 <223> n = A,T,C or G

```

<400> 174
agcgtggtcg cggcgagagc cctgtcagag tggccttngt agaagttcca ggaaccctga    60
actgtaaggg ttcttcatca gtcacaacag galgaacatga aatgatqlar tcaqngtqt    120
cctgggaatgg ggcacatgag atggttglet naagagagagc tcttctctct acattcgccg    180
gglalgggtcl cggcctatgc ctatcggggg tggccgttcl gggcgtgtg qtcgcctaa    240
aacctatctc ctcaagatlc atttcttgc caacaclygg ttgtgacca gaagtgcacg    300
qnaagctgnat accatttcca gtcacatacc cagggttngt gacgaaggg gctcttctga    360
ctgtggaagg aacatccaag atctctgtc catqaagatt ggggtclggg agqnttacca    420
gttggggaag ctgctctgtc tcttctctc caatcanggg ctggtctctc tgaattattct    480
tcagggcact gacataaatt ctatattcgg ntcccgggtn cagcaataa taataacct    540
ctgtgacacc anggcggggc cgaagganca cl                                572

```

<210> 175
 <211> 372
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(372)
 <223> n = A,T,C or G

```

<400> 175
agcgtggtcg cggccgaggt cctcaccaga ggtaccacct acaacatcat agtgggggca    60
ctgaagagcc agcagaggca taaggttcgg gaaagaggtt ttaccgtggg naactctctc    120
aacgaaggct tgaacacacc taccgataac tctgtctttg acccctacac agtttccat    180
tatgagglcg gggatgagtg ggggagagtg tctgaatcag gcttttaact gttgtgocag    240
tgcctangct ttggaagtgg tcatrtcaga tctgalicat ctgagtggtg ccattgacaat    300
gggtggaact acaagattgg agagaagtgg gacggtcagg gagaaatgg acccgagcgg    360
ggggcgtctc ga                                372

```

<210> 176
 <211> 372
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(372)

<223> n = A, T, C or G

<400> 176

tcgaacagcc	ttccggggcag	gtccattttc	tccttgacgg	tcacacttct	ctccacttct	60
gtagtccaca	ccattgtcat	ggcaccakct	agatgaacac	catctgaat	gaccacttcc	120
aaagcctaag	cactggcaca	aaattttaaa	gcctgottca	gacattcglt	ccactcacc	180
tcgaacagcc	taatgggaaa	ctgtgtaggg	gtccaaagac	gagtcctccg	taggttggtt	240
caagccttcg	ntgacagagt	tgcctacggc	naaacctctt	tcacgaacct	tafgcctctg	300
ctggtctttc	agtgcctcca	ctatgatgtt	gtaggctgca	cctctggtga	ggacctcggc	360
cgcgaccacg	ct					372

<210> 177

<211> 269

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(269)

<223> n = A, T, C or G

<400> 177

agcgtggccg	cagcccgaggt	ccattggctg	gaacggcctc	naacttggag	ccagtgalcg	60
tctcagcctt	ggttctccag	ctaattggtg	tggggtctct	agtagcatct	gtccacacgg	120
cccttcttgg	tgggctgaca	ttctccagag	tggtgacaac	acctgagctt	ggltctgctg	180
tcacagtgtc	cttaagagca	tagacaccca	cttcattatt	ggcgacacac	ataagtccgt	240
atacagacac	ggatggacat	gtccagacac				269

<210> 178

<211> 529

<212> DNA

<213> Homo sapien

<400> 178

tcgagcggcc	gcctcgggcag	gtcctcagac	cggtttctga	gtacacagtc	agltgltgltg	60
cccttcgacga	tgcctcggag	agccagacac	tgaattggaac	ccagltgacac	gtatttctctg	120
tcacacacac	ctggaagtcc	actcagacac	cacccacacg	actgagcgcc	cagtcggacac	180
cccccattgt	tcagctcact	ggatctcgag	tgcctgtgac	ccccaggag	agacacggac	240
caatgaagga	aatcaacctt	gtcctcgac	gtcctcctgt	ggttgtgltc	ggacttatgg	300
cggtcctgac	atctggaagt	atggtctatg	ctcttaagga	tccttggac	agcagaccag	360
ctcaggtgtg	tgtcaccact	ctggagaatg	tcagacacac	agaagggct	cgtgtgacag	420
atgctactga	gaccaccatc	accattagct	ggcagaccaa	gactgagacg	atcactggtc	480
tcacagtga	tgccttctca	gccaalggac	ctcgcccgcc	accacgctt		529

<210> 179

<211> 454

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(454)

<223> n = A, T, C or G

<400> 179

```

agcgttggtcg cggccgaggt ctggccgaac lqccagtgtg cagggaagat gtacatgtta      60
tagntctttct cgaagtcnng gncceguagc tccacggggt ggtctctctc ctccagggcg      120
ttctcatttct catggtttct ctccaccgcg agctttctgt tctcagtcag aaggttgttctg      180
tcttcacccc tctcatacag ggtgaccagg acgtttcttg qccagtcccc catctccagg      240
gggaattcgg tccagctcag gtccaggcaa ggggggatgt atttgcaagg ccgatgttag      300
tccaaagtga gcttggtggc cttcttggtg cctccaaagg tgcattttgt ggcaaagaaq      360
tggcaggaag agtcgaaggt cttgttgtna ttgctgcac ctttctcaaa ctctgcaatg      420
ggggctgggc agacctgcgc gggggggcgc tcga

```

<210> 180

<211> 454

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(454)

<223> n = A,T,C or G

<400> 180

```

tcgagggggc gcccgggcag gtctggcccag cccccccttg caggtttgag aaggnatgaa      60
gcaatgacaa caagaccttc gactcttctt gcccacttct tgcacacaaa tgcacccctg      120
aagggcctcaa gaggggccac aagcttcacc tggactacac cgggaccttg aaatacatcc      180
cccccttgct ggaactctgag ctgaccgaat tccccctgag catgcccggc tggctcaaga      240
acgtctctgt caccctgtat gagaggggat agyacaacaa ccttctgact ggggagcuaa      300
agctgcgggt gaggaaatct calgaggaatg anaagcgctt gnaagcanga gaccaccccg      360
tggagctgct gggccgggac ttcgagaaga actalaccat gtacatcttc cctgtacact      420
ggcagttcgg ccagacctcg gcccgagaca nact

```

<210> 181

<211> 102

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(102)

<223> n = A,T,C or G

<400> 181

```

agcgttgntg cggacgagcg ccacaaagcc attgctctga gttttanttc agctgcaaan      60
aataccncca gcatccact cactaaccag catatgcaga ca

```

102

<210> 182

<211> 337

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(337)

<223> n = A,T,C or G

<400> 182

```

tcgagcggtc gcccgggcag gtctggtcgg atagcannng gcatnttttg gaatggatga      60

```

ggtctggcag	cctgagcagc	ccagcagagg	cttggcctca	gttgagcaat	ttggcagga	120
ggatcgtatg	cagcagcgtt	ctgagttctg	ggcctagctg	ccatgagga	acctgagga	180
ggcgtgggt	ggtanggtt	gattacagg	ctgggaacag	ctcgtacac	tgccattctc	240
tgcatatact	ggttagtgag	gagagcctgg	cgtctctctt	tgagtgagc	taaagctaca	300
tacatggt	ttgaggact	ggcgcgcag	cagcchl			337

<210> 183

<211> 374

<212> DNA

<213> Homo sapien

<400> 183

ctggcgggag	ggcggggcag	gtccattllc	tcctgaggg	tcacccttcl	cttcaattctt	60
gtagtccac	cccttctctc	gacacccat	agatgaatca	cactctgcat	gaccacttcc	120
aaagcctaag	cactgacac	acagtttaaa	gctgattcc	gacattcgtt	cccactcacc	180
tcacacggca	taatgggaaa	cgtgttaggg	gtcaagggac	gagtcattcc	taggttggtt	240
ccagctctcg	ttgacagag	ttgccacgg	taacacaccc	ttcccgaacc	ttatgcctct	300
gctggtcttt	ccagtcaccc	cactlctgct	ttgtaggtgg	cacctctggt	gagggcctgg	360
gcccgcacac	cgt					374

<210> 184

<211> 375

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(375)

<223> n = A, T, C or G

<400> 184

agcgtggttt	ggcgcgcagg	tcctcaccan	aggtgcaccc	tacacactca	tcctgagggg	60
actgaagag	cagcagaggc	acaaggttcg	ggaaggggtt	gttaccgtgg	gcaactctgt	120
ccagcagggg	ttggagcacc	ctacggagga	ctcgtgcttt	gacccctaca	cagttccca	180
ttatgccttt	ggcgttgagt	gggacagaac	gtcgaatca	ggctllcacc	tcctgagggg	240
gtgcttange	tttgaagtg	gcaatttcag	atgtgattcc	tcctgagggg	gtcgtgacaa	300
tggtgngaac	tacaagattg	gagagagtg	gacaccttcc	ggganaaaat	ggacctgccc	360
ggcgcgcagg	cgcg					375

<210> 185

<211> 148

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(148)

<223> n = A, T, C or G

<400> 185

agcgtggttg	ggcgcgcagg	ctggtctnct	gtcctangtg	tcctcctgaa	ccatcagggc	60
caastaagcg	ccggtatgc	ccctgatttg	gallgacaca	cagctacat	tgcatgcaag	120
tttcttgagc	tcagggagaa	gattgac				148

<210> 186

<211> 397
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(397)
 <223> n = A, T, C or G

<400> 186
 tgcagcggcc gcccgggcag gtccaatga aacaaacagt tctgagaccg ttcttccacc 60
 actgattamg agtggggngg cgggtattag yyataatatt catttagcct cclyagcttt 120
 ctgggcagac ttggttaccg tgcagcctcc agcagccttc tggctccatg ttctgatgac 180
 accacacgca actgtctgtc tcatatcagc aacagcaaag agaccacaaag gtggatagtc 240
 tgagnagctc tcaacacaca tgggcttgcc agaacacata tcaacaatgg gcagcatcac 300
 cagacttcan gaatttaagg gcaatcttcc agctttttac cagaacggcg atcaatcttc 360
 tccctcagct cagcaaatct gcatcgaatg tgagcgg 397

<210> 187
 <211> 584
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(584)
 <223> n = A, T, C or G

<400> 187
 tgcagcggcc gcccgggcag gtccaatga aacaaacagt tctgagaccg ttcttccacc 60
 ccactccaat tgcctggcgc tccactcttg gaaacttccac taaccagatc caggcagcct 120
 tccggggagcc accgcttctt gtggntactg accccagggc tgcagcctcc cctctcaccg 180
 aggcattctt tgltaaccca cctaccattg cgclytctan caccagattct cctctgogct 240
 atgtggacat tgccttcccc tgccttcccc cgggagctca ctcagngggg ttctgatgtg 300
 tggatgtctg ctggggaagt tctgcgcatg cgtggcacca ttctcccttg agaacatctg 360
 gaggcctctg ctgatcttga cttctacaga gatctctgag agattgaaa agaggaacag 420
 gctgnttctg gannacacac tgccttcccc angaatctc angggtgaaa aggactctc 480
 ccgctcttga attcaactgt cctcaacttg angntgcaga ctggtcttga aggagacatc 540
 gggcctctg ggcctattta agcancttcc gtcgcgacaa cgt 584

<210> 188
 <211> 579
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(579)
 <223> n = A, T, C or G

<400> 188
 agcgtgngtc gggcgccagg tgcagcctag gcacagaggg cactctgtac ccttccagcc 60
 agtctgcaac ctcaggctga gtgcantga actcaggagc gggagcagtc cattccctct 120
 gaaattcttc ctgggcact gcttctcag cagcagcttg cctctttttt tcaatctctt 180
 caggatctct ttagagagac agatcaggca tgcctccca tgggtattca cgggaaatgg 240

tgccacgcac	gcgcagaaac	tcccgagcca	gcctccacca	caccacaccc	atcgagtgag	300
ctccattgtt	gttgcatggg	atgggcaatg	tccacatagc	gcagagagag	atctgtgtta	360
cacagcgcca	tggtaggtag	gttaccatag	gatgcctccg	cgagagagctg	gtggtcagcc	420
ctgggggtca	gtacacacac	gacgcctggg	ctcccggaag	gctgcctgga	tctgggtagt	480
gaaggntcca	ggagtgaagc	ggccacacac	tggagtggct	gacgagagag	gcagcaaac	540
tcacacacag	ccctctggac	ctgcctggcg	gacgagagag			579

<210> 189

<211> 374

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(374)

<223> n = A, T, C or G

<400> 189

tcagagagag	gcgcgggag	gtccatlllc	tccctgacgg	gcacacattc	ctccaatctt	60
gtagtcacac	cccttctcct	gcacacattc	agatgaalca	ctctgcaat	gaccacttcc	120
aaagcctaag	ccctggcaca	acagctttaa	gccttcttca	gacattcggt	ccacacacac	180
tccacgggca	taatgggaaa	ctgtgttagg	gtcnaagcac	gagtcacacg	taagttggtc	240
caagcttccg	tcacacagag	gcacacattc	acacacacac	tcccgcaacc	ttatgcctct	300
gctgggtctt	ccagcctcc	actatgatg	tcagagagag	ccctctggg	gagagacctg	360
gcgcgggcca	cgt					374

<210> 190

<211> 373

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(373)

<223> n = A, T, C or G

<400> 190

agcgtggtcg	gcgcgggag	gcacacattc	gcacacattc	agtgagagca		60
ctgagagagc	gcagagagag	taaggtctgg	gaagagagag	ttacgtggg	caactctgac	120
acagagaggt	gcacacacac	taaggtgac	tcctgcttgc	acacacacac	agtttccat	180
tatgccttgc	gagatgagtg	ggaacgaalq	tcctgacacg	gccttcaaac	gttggtgacg	240
tgcttanctg	ttggaagtgg	gacatttccg	atgtgallca	tcctgaggtg	gcctgacac	300
tgagagagac	tcacacagag	gcagagagag	gcacacacac	gcagagagag	gcacacacac	360
gcagagagag	cgt					373

<210> 191

<211> 354

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(354)

<223> n = A, T, C or G

<400> 191

agcgtgggtcg	cgccnaggt	ccacacagga	agggtcggag	ccctggccgc	catctcgaa	60
ctggaaacca	tgggtcatgc	ctctggccgaa	ccagacatgc	ctcttgtcct	lugggttctt	120
gtgatgtac	cagttctctt	gggccacac	gggtgagtg	gggtacacgc	aggtctcacc	180
agtctccatg	ltgcagaaga	ctttagttgc	atccagggtg	caaccctggg	tggggtcaat	240
ccagtactct	ccactcttcc	agccagagtg	gcacatcttg	aggtcagggc	aggtgcggnc	300
gggggntttt	ggggctgccc	tctggnettc	ggntgtcttc	natctgtctg	ctca	354

<210> 192

<211> 587

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (587)

<223> n = A,T,C or G

<400> 192

lccagcggccc	gcccgggcag	gtctcgaggt	cgcactggcg	atgtctgtcc	lgttggrocc	60
cccgcccttc	ccggacclcc	lcccccctct	ggctcclccc	ggctggllll	cgactcagc	120
ctctgcctcc	agccacctca	agagaaggtc	caagatgggt	gccgclacta	ccgggttgai	180
galcccaatg	tgtttcgtga	ccgtgacclc	gggttggaca	ctccctccaa	gagcclgggc	240
cngcagatcg	agaacatccg	gagcccgagg	ggcagncgca	agcaccocgc	ccgcunetgc	300
cgtgacctca	agcltgcaca	ctctgacttg	aagagttgag	agtactggai	tnacccccac	360
caagctgcac	cctggatgcc	atcaaagtct	lctgcaacat	ggagacttgt	gagacctgcg	420
tgtaccctac	tcagcccggt	gtggcccaaa	agaacttgta	ctccagccag	aacccccagg	480
acaagcagca	lgtctgttgc	ggcgagaaca	tgacncttg	attccagttc	gagctctgoc	540
ggcagggctc	cgaccttgcc	gatggggacc	ltggcccgca	acacgccl		587

<210> 193

<211> 98

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (98)

<223> n = A,T,C or G

<400> 193

agcgtgggng	cggtccgggt	ctccatctcc	agccatacl	ctccctccac	acgtcganag	60
atgaagctgl	ccaaagatct	cagggtggan	aaaaacal			98

<210> 194

<211> 240

<212> DNA

<213> Homo sapien

<400> 194

tccagcggcc	gcacggggag	gtctclccga	cttggactgl	gtccactgc	cagggttcca	60
gggtcccaac	ltgcagacgg	ctcttctgtg	gacagtctct	gtatccgca	aagcaaccl	120
ggagagcttg	ggggaaaaca	ccatggtttt	ctccacctg	agatctttga	acacttctat	180
ctctcagcgt	gcggagggag	gtcttggaat	ggatatttct	acctcgcccg	cgccacgcct	240

<210> 195
 <211> 400
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (400)
 <223> n = A,T,C or G

<400> 195

cgagcggggg	accgggcagg	tncaqactcc	salucanana	accacaaagc	cagalgctcag	60
aagctacacc	atcacaggli	tcacaaccagg	caatgactac	agagactacc	tycacacctt	120
gaatracact	gctcggagct	ccctgtgtgt	catcgacccc	tcactgcca	ttgatgcacc	180
atcacaacctg	cgtttcctgg	ccaccacccc	caatttccttg	ctggtaact	ggcagccccc	240
acgtgccagg	attaccggta	catcatcnag	takanaagc	ctgggcctcc	tcacagagaa	300
gnggtccctc	ggccnnngcc	tantgtccca	naqgnacta	ctactqngcc	ngcnaacggc	360
aaccgatata	nattttgna	ttggcctta	acaataatla			400

<210> 196
 <211> 494
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (494)
 <223> n = A,T,C or G

<400> 196

agcgtggttc	ggggccgagc	tcctgtcaga	glnqcaactgg	tageagklcc	aggaacccctg	60
aactgtaagg	gttcttcate	agngccancc	ggatgacavc	aatatgatga	ctcagaagtg	120
tcctggcaatg	gggnccatgc	galtggttgtc	tgagagagag	cttcttgccc	tgtctttttc	180
cltccaactca	ggqgcctcgt	cttctgatia	tlcttcaggg	caatgacata	aatltghatat	240
tcgggtcccg	gntccagccc	agtaatayta	ncctctgtga	cacccnnngcc	gngcccgagg	300
accactttctc	tgggaagga	ccccagcttc	tcataclhga	tgatgtaacc	ggtaactccg	360
gcacgttggcc	gttgcacatga	tcccagcaag	gaaktnggggt	gtggtggcca	gggaacagcc	420
tttqatggg	gcataaatgg	cagtggaggg	cttccatgac	cacagggggc	gtcccgacat	480
tgtcattcaa	ggtg					494

<210> 197
 <211> 118
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (118)
 <223> n = A,T,C or G

<400> 197

agcgtggncc	cggcccgagg	gcagcgcggg	ctgtgcacac	ttctgctctc	tgcccaacga	60
taaggagggt	ncctgcaccc	aggagaact	taactntccc	gggtcggcc	cttgcggg	118

<210> 198

<211> 403
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1) ... (403)
 <223> n = A,T,C or G

<400> 198
 tcgagcggcc gcccgggcag gtttttttgg ctgaaagtgg ntactttatt ggttgggaaa 60
 gggagaagct gtggtcagcc caagagggaa tacagagacc cgassaaaggg tagggcaggt 120
 gggctggaac cagacgcagg gccagggcaga aactttctct cctcactgct cagcctggtg 180
 ghggutggag ctccnnaatt gggagtgcac caggacacct tcccacagcc attgcccggg 240
 catttcattt ggcacaggaca ctggctgctc acctggcacl ggtcccgaca gaagcccggg 300
 ctggggaaaag ttaattgtta cclgggggca ggaacnctcc ttatcattgn gcagagagca 360
 gaaggtggca cagcccgccc tgcacctcgg ccggtgacac gct 403

<210> 199
 <211> 167
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc_feature
 <222> (1) ... (167)
 <223> n = A,T,C or G

<400> 199
 tcgagcggcc gcccgggcag gtccaccata agtctctgata caaccaaggga tgagctgtca 60
 ggagcaaggt tgatttcttt cattggctcag gnetctctct tgggggncac tggccctcga 120
 tctccctgtg gttgagacatt gggggggctc cactgggggc ttgggct 167

<210> 200
 <211> 252
 <212> DNA
 <213> Homo sapien

 <220>
 <221> misc feature
 <222> (1) ... (252)
 <223> n = A,T,C or G

<400> 200
 tcgagcgggt cggccgggca ggtccaccac acccaattcc ctgctgggat catggcagcc 60
 gccacgtgcc aggattacag gctacatcat caagtatgag aagcctgggt ctcctccag 120
 agaagcggtc cctcgccccc gccctgggtg caccagaggt actattactg gtttgggacc 180
 ggggaacgaa tatccatttl atgtcattqn cctgaagaat aatnnaaan aggggcccc 240
 tgaattggag ga 252

<210> 201
 <211> 91
 <212> DNA
 <213> Homo sapien

<400> 201

agcggtggtcg	cggcggaggt	tgtacaagct	tttttttttt	tttttttttt	tttttttttt	60
tttttttttt	tttttttttt	tttttttttt	t			91

<210> 202

<211> 368

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{368}

<223> n = A,T,C or G

<400> 202

tctagcgggc	gcccgggcag	gtctggcacc	ccccagattc	gccccggcgg	catcaccacc	60
gttngtgggc	ggggagggag	ccagaaatac	cgtgcactga	ggttggacgt	ggggantttc	120
tcttggggct	cagagtgttg	tactcgtaaa	acacggntca	tcatgtttgt	ctacaatgca	180
tataataacg	agctggttcg	taccaagacc	ctggtgaaga	attgcatcgt	gtctatcgac	240
agcaccacgt	acggacagtg	gtacggctcc	caatatgggc	tggccctggg	ccgcagggag	300
gggtccaaag	tgaactctga	ggaagaagag	atttcttttc	aaaaacgac	taaaagaaaa	360
aaaacaat						368

<210> 203

<211> 340

<212> DNA

<213> Homo sapien

<400> 203

agcggtggtcg	cggcggaggt	gaaatggtat	tcagcttctc	ggcactcttg	gtcagcacc	60
cagtgtttggg	caacaaatga	tctttgagga	acatggtttt	gggcggaccc	caacggccac	120
aaagggcacc	ccataaaggc	ataggccaa	acccatcccg	cagaatgtag	gacaagaagc	180
tctctctcag	acaaactctc	cttggggccc	attccaggac	acttctgagt	acatcatttc	240
atgtcatctc	gttggcactg	atgaagaacc	cttacagttc	aggtttcttg	gaaactctac	300
cagtgcactc	ctgacaggac	ctgcccgggc	ggcggctcgg			340

<210> 204

<211> 341

<212> DNA

<213> Homo sapien

<400> 204

tctagcgggc	gcccgggcag	gtctgtcag	agtggcactg	gtagaagttc	caggaacctc	60
gaactgtgag	ggtttttcat	cagtgcacac	aggtttaccc	gaaatgatgt	actcagaagt	120
gtcttgggac	ggggcccatg	gtatggtttt	ctgagagaga	gcttcttgtc	ctacattcgg	180
cgggtatggt	cttggccatc	gcattatggg	ggtggccggt	gtgggaggtg	tgtttccgct	240
aaaaccatgt	tcttcaaaga	tcatttgttg	cccaacactg	gtttgtgtac	cagaagtggc	300
aggaagctga	atctaatctc	acttcgggac	agaccacgct	a		341

<210> 205

<211> 770

<212> DNA

<213> Homo sapien

<220>

<221> misc feature
 <222> (1)... (770)
 <223> n - A,T,C or G

<400> 205

togagcgggc	gcccgggcag	gtctcccllc	ttgcgggccc	ggggcagcgc	atagtgggac	60
tctgaccact	gtcggtaggg	tgtgntntcg	atgagcagca	tgcaattctt	caccagggtc	120
ttggtacgaa	ccagctcgtc	altagatgca	ttgtagacaa	calcquatgat	ccttggtttc	180
cgagtccanc	actctgagcc	ccaggagaaa	ttcccccagc	ccaaacctcag	ggcaggggtat	240
ttcttggtac	ctcccccgcac	acggaccltg	tggatgcggc	gggggccaag	ctgactcctg	300
agggagagga	gattttazac	axxxanogat	ctaaaaaat	tcagagagaa	tatgatgaaa	360
ggaaaaagan	tgcnaaatc	ngcagttctc	lqragggagca	gttccagcag	ggcaaggttc	420
ttgcttgcat	cgattcaagg	ccgggagagt	gtgaccgggc	ngatggctat	gtgctagagg	480
gtaxagagag	ggagttctat	ctlaxagaaa	tcaggggcca	gaatggtgag	tcttcaacta	540
atccaaaggg	gggtttcagc	cnagtgcaat	cagcaaaaac	attgntactg	ntggccaact	600
ttattgggtc	agggcttgca	cantangan	ggctgggtct	lqgggcttgg	attgggagaa	660
gctttggcag	ccttttcttt	ggttttgc	aaaaccttll	gntgaagang	anaacataggt	720
cgagaccccll	aaccgattee	acncgnggg	gggttclhang	gnccncttg		770

<210> 206
 <211> 810
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (810)
 <223> n = A,T,C or G

<400> 206

agcgtgggtc	cggccggagt	ctgctgcttc	agcgaagggt	ttctggcata	accaatgata	60
aggttgccaa	agactgttcc	aataccagca	ccagaaaccag	ccactctctac	tgtttgcagca	120
cctgcaccaa	taaatattgc	agcagtatca	clgtctctgc	tgattgcaat	ggclclgaaac	180
tccttttggc	llaggtltagc	cacacatttc	tgggcccctga	tlcllctttag	aragaaatcc	240
aactctttgc	cctctatgac	atagccatct	gtcgggtcc	actgtaccgg	ccttggaagcg	300
atgcaagcaa	gaaactttgc	ctgctggaac	tgclccclcca	ggagactgct	gatttttgcca	360
ttctttttcc	tttcatcata	tttcttctga	alvtttttag	atcgttttll	gtllaaaxllc	420
lcltcttclcl	caggagctcag	cttggcnncc	gcgcgatcca	cacaghtagt	gttggggagag	480
gtcaacagaa	atacccttgc	cttgggttgg	acgtggggga	tttctcctgg	ggctcagagt	540
ggtgtactcg	taaaacaaag	accatcgatg	gtgncclcca	tgcataaat	aacgagctgg	600
gtcggaccca	aagaacctgg	ngaanaaatg	gntggnctca	tcgacaggac	accgtacnng	660
acaggggagc	gaolccnact	atggccltgc	ccctggggccg	caaaaaagga	aaactgccc	720
ggcggccncc	gaagagccca	ttntggaaaa	aatccatcag	actgggnggc	cngtcgagca	780
tgcantana	ggggcccatl	ccccctnann				810

<210> 207
 <211> 257
 <212> DNA
 <213> Homo sapien

<400> 207

togagcgggc	gcccgggcag	gtcccccacc	aaggctlgaaa	notggatgcc	atcaaggtct	60
tctgcaacat	ggagactggt	gagacctgag	tttaccacac	tcagcccagc	gtggcccaga	120
agaaatggta	catcagcaag	aaccccang	acnagaggca	tgtctggttc	gtccagagaa	180
tgaccgatgg	attccagttc	gagtalaggc	gcaggggctc	cgacactgcc	gatgtggaac	240

tcggcgcgcga ccacggt

257

<210> 208

<211> 257

<212> DNA

<213> Homo sapien

<400> 208

agcgtgctc	cgcccgaggt	ccacatcgg	agggcggag	ccctggccg	catactcgaa	60
ctggatcca	tcggtcatgc	tctcgcgcga	ccagacatgc	ctcttgctc	tcgggtctct	120
gctgatgtac	cagttctctc	ggccacacac	gggclgagtg	gggtacacgc	aggtctcacc	180
agcttcctg	ttgcagacga	cttgatggc	alcaggttg	caaccttggt	tcgggcctc	240
cccgggcggc	cgtcga					257

<210> 209

<211> 747

<212> DNA

<213> Homo sapien

<220>

<221> misc feature

<222> (1)...(747)

<223> n = A, T, C or G

<400> 209

tcgagcggcc	gcgcggcag	glcncacac	cccaattct	lgclggtatc	atggcagccg	60
ccagcgcgc	gcattacgc	ctacntcatc	aagtatgag	gccttggtc	tcctccaga	120
gaagtggcc	ctcgccccc	ccctgggtgc	acagagcta	ctattactgg	cctggaaacc	180
ggaaccgaat	atacaatita	tgctattgc	ctgaagaata	atcagaagag	cgagccctg	240
atlgcgcgc	gcacacac	cgagcttcc	caactggtaa	ccclccaca	cccaatctt	300
catggaccag	agatcttga	tgctcttcc	acagttcaca	agccctctt	cgtcaccac	360
cctgggtatg	acactggaaa	tggtattcag	cttccclgca	ctcttggtca	gcaaccagc	420
gttgggcac	aatgatctt	tgaggaacat	ggttttggc	ggaccacac	gccacacac	480
gcacacac	lccgcgcgc	gcacacac	tcacgcgc	atgtaggac	agagctctt	540
luteacac	ctctctatg	gcacacac	aggacacac	lgctacac	atttatgac	600
tcctgggcac	ttgatgaaa	ccctacagc	tcaggtctc	ggaccttta	ccagccctc	660
tacaggac	ggccggac	cttaagcaca	luncacac	ggcgcttca	agclacac	720
cgccacac	gcacacac	tcctctt				747

<210> 210

<211> 872

<212> DNA

<213> Homo sapien

<220>

<221> misc feature

<222> (1)...(872)

<223> n = A, T, C or G

<400> 210

agcgtggctc	cgcccgaggt	ccactagag	tctglclg	cttgccagc	cagagtctct	60
gggttacaaa	ctcttaggag	ggcttgctgt	gcagagggc	tgcatgggt	tgctgcggtt	120
catcagcgc	agtgagcgc	aaggtgcgc	ggttggtgt	tctngaaac	tcnagggc	180
ngagggctaa	attccatgaa	gttclggt	ggctgatga	tcacacac	gagcctct	240
ccactactac	cgtctnacc	ctlgcctgc	cccccttt	ctgctnacc	calagggctn	300

ntncttgnc	ntcttgggt	ngaanaatna	alngcoetnc	cnttctanc	ncraetngul	360
ccananttg	cttttaana	atcnccttg	ctttnncac	tgttcannth	tttnttctga	420
aacckatn	nttonattan	atnntnnnn	ntcncncnc	ctctctctn	ancnatanq	480
ctnnnaante	cttnnncct	ccncncnnt	ncnctctac	tnantcttc	tnnnccatta	540
ennagetctt	tenttttana	taotgnngcc	nnctctnca	lctctacnat	nlgnnaatn	600
cccccccc	cnanegntt	tttgacctnn	naacctctt	tcctctccc	lncnnaaatt	660
ncnnantlnc	ncnttcnnc	ntttgggnth	ntcccalnet	ttccannnc	tcantctanc	720
ncnctncaac	ttattttct	ntcckcctt	nttctctga	nnccctctnn	tctactlnc	780
nattncatta	natttgaaac	lncnncnnt	antnncctn	ctctacnntt	ttaktttncg	840
ntcncctac	nlacncttt	aatnattnt	ca			872

<210> 211

<211> 517

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(517)

<223> n = A,T,C or G

<400> 211

tcgagcggcc	gcocgggcag	gtctgccaa	gagacccgt	talgtnttg	ggactggcgc	60
gggatgga	ggcggtctg	gcllccccc	cttctgtct	gagatgggg	tggtggggn	120
lctctctct	ttgggttcca	ccatgctcac	glggtcaggc	aggggtctt	laggccnnt	180
cttaccagt	gggtcccagg	gcagcatgat	cttcccttg	atgcccgcc	ccccctgtt	240
gagcaacag	tgccgcacaa	gcagtgctca	cgtagtaagt	taaccgggtc	tcctctgtg	300
atcctcagg	calcnacnnc	cttctgtgat	ttagccctcl	gtcctcggag	tttcccagac	360
acccnccct	cccgctctt	ggccccacte	tcclnqtga	ccgcagcac	accatagcny	420
gcctccgca	caagcaagcc	ctcctaagaa	lctgtaacgc	anancctctg	nlggcnnng	480
cacacaaacc	tctagtggac	ctcggncgcg	nccacgc			517

<210> 212

<211> 695

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(695)

<223> n = A,T,C or G

<400> 212

tcgagcggcc	gcocgggcag	gtctggtcca	ggatagccctg	cgagtccctcc	tactgctacl	60
ccagacttga	catcatatga	atcatactgy	ggagaatagt	tctgaggacc	aglanngcct	120
gattcacaga	ttccaggggg	gccagggnna	ccagggggacc	clggkktcc	tggnatacca	180
gggtcacctt	lctctcccag	atcccccagg	gggcclggat	ctcctctggg	gccttgaggt	240
ccttgacct	taggagggcg	agtaggagca	gltgagggt	gtgggcaaac	tycacaaccl	300
tctccaaatg	gaatttcttg	gttggggcny	tctaattctt	gatccglnnc	nlcttatgtc	360
atcgragaga	acgylactg	agtcacnqac	acatatttgy	calggttctn	gcttccagac	420
atctctctcc	gncatagga	lgacnnaqat	gggaacctnc	tcttcaaca	agcttctgt	480
lgtgcccnaa	ataatgttg	gntgaagcag	accgagaagt	ancnagctcc	cctttttgca	540
ccagcctca	tcctgtctaa	atctcagaca	hcgacttct	ttgggcaaaa	aaggaganna	600
agaaaaagca	gttcaaaagta	ncnccatca	agttggttcc	ttgccttcc	agcaacnygg	660
ccccgttata	aaacacctng	ggccggaccc	ccctt			695

<210> 213
 <211> 804
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc feature
 <222> (1) ... (804)
 <223> n = A, T, C or G

<400> 213
 agccgaggctcg cggccgagggt gcttttatgac gggcccggtg ctgaaggggc gggacaacac 60
 tgatggcgct aacttgaaet gctttttctt lctccttttt gacacaaagag tctcatgtct 120
 gatatttaga catgatgagc ttgtgcaaa aggggagctt gctacttctc gctctgtctc 180
 atcccaactat tcttttgcca caacagggaag ctgttgagg aggatgttcc catcttggtc 240
 agtctctatgc ggtatgagat gtctggaagc cagaaccatg ccaaatatgt gtctgtgact 300
 caggatccgt tctctggat gacataatal gtgacgatac agaattagac tgcacacac 360
 cagaacttcc atttggagaa tcttgctgca tttgcccaca gctccaaact gctcctactc 420
 gacctctcaa tcttccagga cttcaggcc ccaaggqnga tccaggccct cctggtatct 480
 ctgggagaaa tggtagacct ggtattccag gacacccagg gtcacatggt tctcctggcc 540
 cctctggaat cngngaatc atgacctact gtctctcaa ctattctccc anagattca 600
 tatgatgtca cctctgggtt agttagtang ganggacttc caggtatttc tggaccacac 660
 ctgcccgggg ggcttcgaa agcccgaaat tgcannntn ctttcacact gggggttgc 720
 gagctgcttt aaaaaggcca ttccnccctt anngnggggg antacacta ctngggggcg 780
 ttttananag cnggcttggc aat 804

<210> 214
 <211> 594
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc feature
 <222> (1) ... (594)
 <223> n = A, T, C or G

<400> 214
 agcgtggtcg cggccgagggt ccacatcggc aggtctggag ccttggccgc catactcgaa 60
 ctggaactca tgggtcaatc tctgcccaga ctagacatgc ctcttgcctt tgggtttctt 120
 gctgatgtac caattctctt gggccacact ggcttgagtg ggttcaacgc aggtctcacc 180
 agtctccatg ttgcagaaga ctttgatggc atccaggttg cagccttggt tggggtcaat 240
 ccagtactct ccaactcttc agtcagagtg gacatcttg aggtcaccgc aggtctgggc 300
 ggggtctctg cggctgacct ctgggtctca gctgttctcg atctgctggt caggtctctt 360
 gagggtggtg tccnctcga ggtcaccgtc accaaccaca ttggcatcat cagcccggtc 420
 gtacggggca ccatcgtgag ccttctcttg angctggttg ggcagggaat gaagtcgaaa 480
 ccagcgtctg gaggaccagg gggaccsana gttccaggaa gggcccggtg ggggtcagca 540
 gggaccagca caccagatg gaccccgga nacctgccc gctgacctct caga 594

<210> 215
 <211> 590
 <212> DNA
 <213> Homo sapien

<220>

<221> misc feature
 <222> (1)...(590)
 <223> n - A,T,C or G

<400> 215

tcgagcnnnc	gcccggggcag	gtctcgcggt	cgcacttctg	atgcttggtcc	tggttggtccc	60
cccgcccttc	ctggacctcc	tggkccccct	ggctctccca	gcgctggttl	cgacttcagc	120
ttctgcccc	agccacctca	cgagaaggct	caagatgggt	gcggclanta	ccgggttgat	180
gatgccaaig	kggtttctga	ccgtgacctc	gaggtggaca	ccacctcaa	gagcttgcgc	240
cagcagatcg	agaacatccg	gagcccaagc	ggcagccgca	agaacccccc	ccgcaacctgc	300
cgtgacctca	agatgtgcac	ctctgactgg	aaaggtggag	agtactggat	tgaccccaac	360
caagcttcaa	ccctggatgc	catcaaatgc	ttctgcaaca	tcgagactgg	tgagacccgc	420
gtgtacccca	ctcagccccg	tytggccccg	aagaacltgt	acatcagcaa	gacccccaag	480
gacaaaggag	atgctctggt	cgcgagagag	atgacccgat	gattctcagt	cgagtatggc	540
ggccaggggc	cccacccctgc	cgatgtggac	ctccggccgc	gacccacctt		590

<210> 216
 <211> 801
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(801)
 <223> n - A,T,C or G

<400> 216

tnagagggcc	gcccggggcag	gntgnaaacg	ctggkctctc	tggccctctc	ggcaaggctg	60
gtgaagatgg	tcaccttgga	aaacccggac	gccttggtga	gagaggagtt	gttggaccac	120
aggggtctcg	tggtttccct	ggaaclccct	gacttctctg	cttcaaaagg	attaggggac	180
acacttctct	ggtatggattg	gagggacagc	ccggtgctcc	tggttctgag	ggtgaacctg	240
gtgccccctg	tgaasatgga	actccaggtc	aaacagggac	ccgtgggctt	ccgggtgaga	300
gaggacccgt	ttggtgcccc	tgcccccana	ctcggcccg	accacgctaa	gcccgaattt	360
ccagacacac	ggngggccgt	acbantgcat	ccgagctcgg	taccaagctt	gggttctctc	420
tggtcatagc	tggttctctg	gtgaatttgt	tatccgctca	caatttcaaa	cancatacgn	480
ngccggaaaag	cataaagtgt	aaagccttgg	ggttctaatg	agtgaagctaa	ctcncattaa	540
attgctttgc	gctcaclgac	cgcttcttcc	nnnggggaaac	cntggcctng	ccngcttctc	600
ttacntgaaa	tcggccnacc	ccgggggaaa	agncgggttg	cggtatctgg	gccttttttc	660
cccttctctg	gnttaactga	nttantgggc	tttggncant	tcgggttgng	gaganccngt	720
tcacntctac	ncccaaggng	gaaanaaggl	cttcccaaaa	tcggggggnt	ancccaangn	780
aaaacatnng	acnaangggc	t				801

<210> 217
 <211> 349
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc feature
 <222> (1)...(349)
 <223> n - A,T,C or G

<400> 217

agcgtggttc	gcggtggagg	tcggggccag	gggcaccaac	acgtcctctc	tcacacggaa	60
ggccacgggc	tcctgtttgc	actggagttc	cattttcaac	aggggcacca	ggttcaacct	120

tcacccacagg	agcaccgggc	tgcccttina	atccatneng	accatiglin	ccctaaalg	180
ctttgaagcc	aggaagtcca	ggagllpcag	gganaccacc	gagacccctg	tggtccaaac	240
actctctct	caccaggleg	tccgggtttt	cagggttgac	cshuttcacc	agccctqcca	300
ggaggaccag	caggaccagg	gttaccaccc	lccccggggc	gccgctcga		349

<210> 218

<211> 372

<212> DNA

<213> Homo sapien

<400> 218

togagcggcc	gcccggggcag	gtccatttla	tccttgacgg	tcaccattct	ccccaatett	60
gtagttacac	ccattgtcat	ggcannatct	agatgaatca	cattcgaaak	gaccacttcc	120
naagcctaag	cactggcaca	ccagtttaaa	gccttgattca	gacattcggt	cccaactcck	180
tcacacggca	taattgggaa	ctgtgtaggc	gtcaaaagac	qagtcacccg	tagnttggtt	240
caagccttcc	ttgacagagt	lcccccgggt	acaaacatct	tcocgaaccl	katgcctctg	300
ctggtcttcc	ngtgcctcca	ctatgatgtt	gtaggtggca	cctctgggln	ggacctcggc	360
cgcgaccacg	ct					372

<210> 219

<211> 374

<212> DNA

<213> Homo sapien

<400> 219

agcgtggtcg	cggcccgaggt	cctcaacaga	ggtgccaccl	cccccctent	agtggaggca	60
ctgaagagcc	agcagagcca	taaggttcgg	gaagaggttg	ttaccgtggg	caactctgtc	120
aacgaaggct	tgaaccaacc	taaggatgac	lcytgccttg	acccctacac	aglllcccl	180
lctgcgcctg	gagagagagc	ggaaagaaag	tcrgaatcag	gccttccant	cttngtccag	240
tgcttaggct	ttggaggtcg	tcatttcaag	atgigattca	lctagatggt	gcaatgacaa	300
tggtgtgaac	tacaagattg	gagagaagtg	ggaccgllcc	ggagaaaatg	gacctgcccc	360
ggccggccgc	tcca					374

<210> 220

<211> 828

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}... (828)

<223> n - A, T, C or G

<400> 220

tcagagcann	gcccggggcag	gtccagtagt	gccttcggga	ctgggttcac	ccccaggtct	60
ggggcagttg	tcacagcgcc	agccccctct	gcccaccang	cattgtgcagg	agcaaatggc	120
accgagatat	tcctttctgc	actgtttctc	lccgtgggtat	gtcttcccat	catttllacc	180
cgttgcctca	tcaggtttcc	actlgaattc	tccttttccg	cttccacagac	atgtgcagct	240
catttggtct	gctccatagt	ttgggggaaa	tttgttggaa	ctgtgccact	gacctttact	300
tcctctctct	ctactggagc	tttgcctact	tcacattctg	ctgttggtta	aatggtggat	360
cttctatcaa	tttcattgac	agtacccact	lctcccaaac	atccagggaa	alagtgatll	420
cagagcgalk	aggagaacca	aattatgggy	cagaaataag	gggttttcc	acaggttttc	480
ctttggggga	agatttcagt	gggtgactll	aaagaatact	caacaglgln	ttctccccc	540
tcgcaaaaga	agaaacngla	aatgatggaa	ngcttctgga	gatgcmmma	tttaagggaac	600
ccccagaact	tcacatclla	caggacctac	ttcagllllac	annaagmacc	atantctgac	660

tcacaaagga	cccaagtagc	cccatggaca	gcatttttag	cccttccccc	ggggaacann	720
ttactttctt	aaaccttggg	ccnngacccc	cttaagacca	atttttggaa	antttccctt	780
cnncgggggg	gncclccnac	atgctttttna	agggcccaat	tnccccc		828

<210> 221
 <211> 476
 <212> DNA
 <213> Homo sapien

<400> 221	
tcagaggggc	gcccgggcag
gtgtcggagt	ccagcagggg
aggcgtggtc	ttgtagtgtg
60	
tctccggctg	cccattgctc
lncacactca	cggcgatgtc
gctgggctag	aagccttllg
120	
ccagccaggt	caggtctgac
tggttcttgg	ttatctcttc
ccaggatggg	ggcaggggtg
180	
acacctgtgg	ttctcggggc
tgccttttgg	ctttggaggt
ggttttctcg	atgggggctg
240	
ggagggctll	gttggggacc
tggcacttgt	actccttgcc
attcagccag	tectgggtgc
300	
ggacgggtgag	gacgctgacc
acacggtaag	ttctgtttga
ctgtctctcc	ctgtctctcc
360	
tcttggcatt	atgcacctcc
acgcctgcca	cgtaccagll
gaacttgacc	tcagggtctt
420	
cgtggctcac	gtccaccacc
acgcatgtaa	cctcagacct
cggcccgagc	cccgct
476	

<210> 222
 <211> 477
 <212> DNA
 <213> Homo sapien

<400> 222	
agcgtggtcg	cggccgaggt
ctgaggttac	atgctgtggt
gtggacgtga	gcacagagga
60	
ccctgaggtc	aagttcaact
ggtacgttgg	ccagctggag
gtgcataalg	ccaaagacaaa
120	
gcccggggag	gagcaglcac
acagcactca	cctgtgtgtc
agcgtctcca	ccgtccttga
180	
ccagcacttg	ctgacttcca
agcagtagaa	gtgcaggttc
tccaaacaaag	ccctccacagc
240	
ccccatcgag	aaaaccatct
ccaaagccaa	agggccagcc
ccagagaacca	cagglglaaa
300	
ccctgcccc	atcccgggag
gagatgacca	agacccaggt
cagcctgacc	tgccctgtta
360	
aaggtttcta	tccacagcag
atcgcttctg	agtgaggagag
cactgggtcc	tccagagaaa
420	
actacaagac	ccagcctcca
ctgcttctga	ccagcctcca
477	

<210> 223
 <211> 361
 <212> DNA
 <213> Homo sapien

<400> 223	
tcagaggggc	gcccgggcag
gttgaatggc	tccctcctga
ccaccccggt	gtcggllggg
60	
ggtacagagc	tccgatgggt
gaaaccattg	ccatagagac
tgccclgtc	caggctgtag
120	
gggcccagct	cagtgatgac
gtgggtcagc	tggctcagcl
lccagtagag	ccgtctcttg
180	
tccagttccg	gtcttttggg
gtcaggagca	tgggtgagca
cagcatccac	tctgggtgct
240	
gccccatcct	tctcaggcct
gagcaaggte	agcttgcac
cagagtacag	agagctgaga
300	
ctgggtgtct	tgaacaaggg
cataagcag	ccctgaagga
cacclcgacc	gctaccacgc
360	
361	

<210> 224
 <211> 361
 <212> DNA
 <213> Homo sapien

<400> 224	
agcgtggtcg	cggccgaggt
gtccttcagg	gtctgtttct
gcccctgttc	aagagacccc
60	

gtgtcagctc	tctgtactct	ggttgacagc	tgaccktct	caggcctgag	agggatgggg	120
cagccacccag	agtggatgct	gtctgcaccc	alcgtctctga	ccccaaaagc	cctggactgg	180
acagagaggg	gctgtactgg	aggckgagcc	agctgaccca	cggctacact	gagctgggac	240
cctacacct	ggacaggagc	agtctctatg	tcaatggctt	caaccatcgg	agctctgtac	300
cacccacccag	aacggguytg	gtcagcgagg	agccal.kana	cctggccggg	cggcggtctg	360
a						361

<210> 225

<211> 766

<212> DNA

<213> Homo sapien

<220>

<221> misc feature

<222> (1) ... (766)

<223> n = A, T, C or G

<400> 225

agctgtgtctg	aggcgaggt	cctgtcagag	lpgcactggt	agaagttcca	ggasccttga	60
actgtaagg	ttcttctcca	qthccacccag	gctgacatga	aatgatgtac	lucgaggtgt	120
cctggaggtg	ggcccatgag	atggtttgtct	gagagagagc	l.l.l.l.g.l.l.l.	acattctggg	180
ggtatgtgtct	lpgcctatgc	cttatggggg	tggcctgtgt	ggtgtgtgtg	gtccgcttaa	240
aaccatgttc	ctccaaagtc	at.l.l.g.l.l.g.l.	caaacactgg	tgtctgacca	gaagtgcacg	300
gaagctgaat	accatttcca	gtgtcatacc	cagggtgggt	gacgaagggt	gtcttttgaa	360
ctgtggaagg	aacatccaa	atctctggtc	catgaagatt	gggtgtgtga	agggcttaca	420
gttggggag	ctcgtctgtc	tttttcttc	caalccgggg	ctcgtcttct	tgatttattct	480
tcagggcant	gcctaaatc	ql.l.l.l.l.l.l.l.	lcccggttcc	aggccagtaa	tagtagcttc	540
tgtgacacca	ggcgggggcc	qagggacct	tctnttgaa	gagaccagct	tctcatactt	600
gatgatgag	cggtaatcc	tggcactgg	nggttgcatg	atnccaccaa	ggcaatgggn	660
ggggggggg	ctgcctggcg	gcggttcnaa	agccca.l.l.c	caacacac.l.l.g	gngggg.l.l.c	720
tatggatccc	actcngtcca	acttgggggg	atatggcata	actttt		766

<210> 226

<211> 364

<212> DNA

<213> Homo sapien

<400> 226

togagggcc	ggcggggcag	gtcctttncc	ttttcagcaa	gtgggaaggt	gtaatccgtc	60
tcacagaca	agccaggac	tcgtttgtac	cgtttgatga	tagaatgggg	l.l.l.l.g.l.l.g.l.	120
atcgt.l.l.l.l.	agttca.l.l.l.g	cagacagaca	ctggcaccct	tgcggacacc	ctccaggag	180
cgagaatgca	gaatttcttc	tttgcabata	agcacttccg	ggttgtagat	gttgccattg	240
togaacacct	gctggatgac	cagcccaag	gagaaggggg	agatgttgag	catgttcagc	300
agcgttgctt	cgttggtccc	cactttgtct	ccagttcttg	tcagagctctg	gcggcgagag	360
cggt						364

<210> 227

<211> 275

<212> DNA

<213> Homo sapien

<400> 227

agcgtggctg	cggccgaggt	ctgtcctaca	gtcctcagga	ctctactccc	tcagcagcgt	60
gggtgacgctg	ccnccacagca	acttgggcac	ccagacctac	acctgnaacg	tagatccaca	120
gcacagcaac	acccgggtgg	acaagagag	l.gagcccaaa	tttttgtgaca	aaactccacc	180

atgcccacccg tgcacacgac ctgaactcct ggggggacccg taccctctcc tcttcccccg 240
 catccccctt ccaaacctgc cggggcgccg gctcg 275

<210> 228
 <211> 275
 <212> DNA
 <213> Homo sapien

<400> 228
 cgagcggccg cccgggcagg tttggaagg ggatgcggg gaagagggaag actgcgggc 60
 ccccccggag ttcaggtgct gggcacggcg ggcaagtgtg agttttglen caagatttgg 120
 gctcaactct ctgtccacc ttggtgttgc tgggcttgtg alctacgttg caggtgkag 180
 totgggtgac gaagttgctg gagggtacgg tcaccacgct gctgaggag laggatctcg 240
 aggactgtag gacagacctc ggcgcgcacc acgct 275

<210> 229
 <211> 40
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{40}
 <223> n = A,T,C or G

<400> 229
 ngtgggttcc ggtcggcag gaccactcct ctccgaata 40

<210> 230
 <211> 208
 <212> DNA
 <213> Homo sapien

<400> 230
 atgctggtcg cggccggagt cccaccllga ctctgcaca gacccgalsg ctgcctctcg 60
 gaagcgcaga totgttttaa agtctgcagc aatttctcgc accagacgct ggaagggaag 120
 ttgcgcacac agaagttcag tggacttctg alacgtctca atttcacgga gcgccacagt 180
 accaggaact gcccggcgcg ccgtctga 208

<210> 231
 <211> 208
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}...{208}
 <223> n = A,T,C or G

<400> 231
 tcgagcggcc gcccgggcag gtctgtgtac tggggcgcl: artgaatta gacgttatca 60
 gaagtccact gaacttctga ttgcacaact tcccttcacg cgtctggtgc gagaattgc 120
 tcaggacttt aaaaacagatc tgcgttccca gaggcagct atcggtgctt tgcaggagga 180
 agtgcgggc ctggcgcgcc accacgcl 208

<210> 232
 <211> 332
 <212> DNA
 <213> Homo sapien

<400> 232
 togagcgggc gcccgggcag gtccacctcg gcagggtcgg agccctggcc gcctactctg 60
 aactgggact catcgggtcat gtctctcgcc aaccagacat gcctcttctc ctctggggttc 120
 ttgctgatgt accagttctt ctgggccaca ctgggtgag tggggtaaac gcaggtctca 180
 ccagttctca tgttcagaa gacttctgt gcctccaggc tggagccttg gttgggtca 240
 atccagttct ctcacactct ccagtcagag tggcactct tgggttcacg gcaggttcgg 300
 gcggggttct tgacctcgcc cgcgaccacg ct 332

<210> 233
 <211> 415
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(415)
 <223> n = A,T,C or G

<400> 233
 gtgggnttga acccttttca nctccgttg gtaccgagct aggtccact agtaccggcc 60
 gccagtgtgc tggcattcgg cttagcgttg tccggtccca ggtccagaac ccgcccgcga 120
 cctgccttga cctccagatg tgcacactct actggaagag tggagagtar tggattgacc 180
 ccaaccaagg ctgcacctg gatgcctca aagtcctctg caacatggag actggttggg 240
 cctgcgtgtc cccactcag ccagtggtg ccagaagaa ctggttcact agcaggaaac 300
 ccaaggacaa gaggcattgc tggttcggcg agagatctga ccatgcatte cagttcagat 360
 atgggtggca gggtctcgac cctgcagatg tggacctgac cgggctggcg ctgga 415

<210> 234
 <211> 776
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(776)
 <223> n = A,T,C or G

<400> 234
 agcgtggtcg cggccgaggt ctgggatgt cctggttctc cagttagata ttacaggatc 60
 acttaccggg aaacgggagg caatagccct ctccaggagt tcactgtgcc tgggagcaag 120
 ttatccagctt cctccagctg ccttaccctt ggagttgatt ataccatcac tgtgtctgct 180
 gtaactggcc ctggngccag cccnccaagc agcaagccca ttccatttaa ttaccgaaca 240
 gaaattgaca aaccatccca gatgcaagt accgtgttct ggttccagag taaccaccac tcccaaaaat 300
 agtggtctgc ctccaagtt cctgttact ggttccagag taaccaccac tcccaaaaat 360
 ggaccaggag caaaggggac taaaactgca ggtccagatc aaacagaaal gactatctga 420
 gcttgcagc cccagttgca gtaagctgt aagtgctctc gctcagatc caagcggaga 480
 gaagtcagcc tctggttccg actgcaagta accaaccatg atcgctcaa ggaactggat 540
 tcactgctgn ggatgcgat tcaatcaaaa ttggttggga aaacccacag gggaagttt 600
 ncagtcnag gnggacctac tcaagccctg aggttgggct ccttgaatnt tctttnct 660
 gatggggaaa aaaaacctt annacttgaa ggaactgccc gggcggcctt ncaaaaccca 720

attccacccc cttggggggcg ttcctatgggg cccactcggg ccaaaccttg ggtaan 776

<210> 235
 <211> 805
 <212> DNA
 <213> Homo sapien
 <220>
 <221> misc_feature
 <222> (1)...(805)
 <223> n = A,T,C or G

<400> 235
 tccggcgggc gcccgggcag glecttgcag ctctgcagtg tcttcttcac catoaggtgc 60
 agggaatagc tcatggatc cactctcagg gctcgagtag gtcacacctgt acctggaaac 120
 ttgccctctgt gggttttccc aagcaatttt gctggaaatcy gcatccacat cagtgaaatgc 180
 cagtccttca gggcgatcac tghlqgttac tgcagtclyg accagagggt gactctctcc 240
 gcttggatc tggagataga cactanccac atactccact gtgggctgca agccttcaat 300
 agtcatttct gtttgatctg gacctgcagt tllhgttttt gttggctctn gtcatttttt 360
 gggagtgggt gttactctgt aaccagtanc aggggaactt gaaqqnagcc acctgacact 420
 aatgctgctt hntfgaacal cggctccttg catctgggal gctttgtcaa tttctgllcg 480
 gtaattaatg gaatttggct tgcctgcttg ggggclhgtc tccacggcca glgacnccat 540
 acacagtgat ggtataatca actccaggtt taagncgctg atggtagcty aacttttgc 600
 ccaggcacia gtgaactcct gacagggclg tttcctnctg ttctncthaa gtgactctgt 660
 autatctcac lgggacccga ngnnquatc caaaccttcg ggcynagccc cctaagccga 720
 attntgcaat atncatcaca ctggcggggc ctcganccct cattaaaagg ccaatctccc 780
 cctataggga gtnctantaca atting 805

<210> 236
 <211> 262
 <212> DNA
 <213> Homo sapien

<400> 236
 tccagcgggc gcccgggcag gtcacllllh gtttttggtc atgttccgtt agtcaanagt 60
 aaaaactaan tttqanagt quatccaan gaaaaaata ltttccaaag tccatgtgaa 120
 attgtctccc atttttttgg cttttgaggg ggttcagttt gggttgcttg tctgttccc 180
 ggttgggggg aaggttgggt ggttgggagc agccaggtt gggatgggg ggttttccag 240
 gaaqcaagcc aggcacact ca 262

<210> 237
 <211> 372
 <212> DNA
 <213> Homo sapien

<400> 237
 agctatgtct cagccagagt ccttaccaga ggtgccaccl acaacatcat agtggaggca 60
 ctgaaagacc agcagaggca taagggttcag gaagaggtt ttacgtggg caactctgtc 120
 aacgaaggct tgaaccaaoc taaggatgac tccgtgcttg accctacac agtcttccal 180
 tatgccttg gagatgagt ggaacgaaly tctqnatcag gctttaaccl gttgttccag 240
 tgcctaggct tgggagtggt tcatctcaga tctgattcat ctgaglygtg ccatgacaat 300
 ggtgtgaaccl ucaagatttg agagaggttg gaccgtcagg gagaaatag acctgcccgg 360
 ggggagctc ga 372

<210> 238

<211> 372
 <212> DNA
 <213> Homo sapien

<400> 238

tggaggggac	gcgggggacg	gtccattttt	tccttgacgg	lcccaattct	ctccaatctt	60
ghagtccau	ccattgtcat	ggcaccctct	agatgaalca	catctgaast	gaccacttcc	120
aaagcctaag	cactggcaca	acagtttaaa	gccttattca	gacatcngtt	cccactcatc	180
tcacacggca	taattgggaa	ctgtgttagg	glcaaaagca	gagtcatacc	taggtltagt	240
caagccttcg	ttgacagagt	tgcctccggt	aacaaactct	tcocgaacct	tatgcctctg	300
ctggctcttc	agtgcctcca	ctatgatgtt	gtaggtggca	cctctgggtg	ggacctcgge	360
gcgacccag	ct					372

<210> 239
 <211> 720
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (720)
 <223> n = A, T, C or G

<400> 239

tggaggggac	gcgggggacg	gtccaccata	agtcctgala	caaccaaggga	tgagctgtca	60
ggagcaagggt	tgatttcttt	cattggctcc	gtcttctctt	tgggggtcac	cgcactcga	120
tatccagtga	gctgaacatt	gggtgggtgc	cactaggcgc	tcaggcttgt	gggtgtgacc	180
tgagtgaaat	tcaggtcagt	tgggtgcaag	ctagtggtta	ctgcagctcg	aaacaggggc	240
tgactctctc	cgcttgattt	ctgagcatag	acactaacca	ctactccac	tgtgggtgc	300
aagccttcaa	tagtcatttc	tgtttgatct	ggacctgcaq	ttttagtctt	tgttggctct	360
ggctccatttt	tgggagtggg	ggttactctg	laccaggtaa	caggggaact	tgaaggcagc	420
caactlgaac	taaltgltgt	gtcctgcaaa	tgggtcactt	gcactcggga	tggtttgaca	480
atttctgttc	ggttaattat	ggaaatttgc	ttgctgtctg	cggggctgtc	tccacggcca	540
gtgacagcat	acacagngat	ggatnataca	actccaggtt	taaggcctct	atggttaact	600
taaaacttgtc	cccaagcagc	gaactlgaag	acaggggtatt	ctttctggtt	lccaggggca	660
gancctggaa	tnntctcctt	ggancagaag	gancntccaa	aacttggggc	ggaacccctt	720

<210> 240
 <211> 691
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (691)
 <223> n = A, T, C or G

<400> 240

agcgtggctg	cggccgaggt	cctgtccagag	tggcactggg	agaagttcca	ggaacccctga	60
actgtaagggt	ttcttcatca	gtgccacacg	gatgacatga	aatgatgtac	tcagaagtggt	120
cctggaatgg	ggcctctgag	atggttctct	gagagagagc	ttcttglact	aaallagggc	180
ggtatlggtct	lqgcctatgc	cttalggggg	tggccttgg	gggcgggtgtg	gtccgctat	240
aaacatgtlcc	ctcaaagatc	alllghttcc	caacactggg	ctgctgacca	gaagtgcacg	300
gaagctgaaat	accatttcca	gtgctctaac	caggytgggt	gacgcaagggt	gtcttttgaa	360
ctgtgggagg	aacatccaaq	atctctgggt	cahgagagatt	gggtgtgtga	aggttacca	420

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gttgggggaa ctcgtctgtc tttttcttcc caatcagggg ctgcgkcttc tgal.kattot      480
tcaggggcaat gacataaatt gtatatctgg ttcccggttc cagggccagta atagttagcct      540
cttgtgacac caggcngggc ccanggaccc cttctctggg angagacccc gcttctcata      600
cttcgatgat taaccccggt atctctgcac tggcggctgn catgataccu ncaagggaatt      660
gggtgngngg gacctgcccg gcggccctcn a                                693

```

<210> 241
 <211> 808
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}... (808)
 <223> n = A, T, C or G

```

<400> 241
agngtgggng cggcnggggt ctgggatgct cctgclytca cagttagata ttacaggatc      60
atttacggag aaacngggag anatagcctt gtcacggagt tcactgtgac tgggagcaag      120
ttacagcta ccatacgagg ccttaaacct ggagttgatt ataccalnac tgtgtatget      180
gtcactggcc gtggagacag ccccgcaagc agcaagccaa llttatttaa tiaccgaaca      240
gaaattgana aaccatcccc galgcagagt accgatgttc aggcacacag cattagkgtc      300
aagtggctgc cttaagttc cctgttact ggttacagag taaccaccac kccccaaaat      360
ggaccaggac caacaaaaac taaaactgca gytccagatc aaacagaaat gactattgaa      420
gggttgacgc ccacagtggg gtatgtgggt agtgtctatg ctacgaatcc aagcggagag      480
agtcagcttc tggkllcagac kgaagtaccc actatctctg caccactga cctgaagkltc      540
actcaggtca cccccacang cctgagccgc cagtgcacnc cacccaatgt kactcactg      600
gatctcaggt gggggtgacc cccaaggaga agacccggac ccatgaagga aatcaacott      660
gctcctgaca gctcctcagn ggglykatec ggacttatgg gggactgccc cggcngggccg      720
ntcgaaancc aattntgaaa ttctcttccc actggngnqc gnttcagact tnettnkann      780
nggcccgaatt cncctntagn gggctcgn                                808

```

<210> 242
 <211> 26
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}... (26)
 <223> n = A, T, C or G

```

<400> 242
agngtgggng cggcnggggt cnagga                                26

```

<210> 243
 <211> 697
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> {1}... (697)
 <223> n = A, T, C or G

<400> 243

tcgagcgggc	gcccggggag	gtccacccca	ccccattcc	tgctgggtatc	atggcagccg	60
ccacgtgcc	ggattaccgg	ctacatcatc	aaglatgaga	agcctgggtc	tcctcccaga	120
gaagtgggtc	ctcgccccc	ccctgggtgc	acagaggcta	ctatlcctgg	cctgggaacg	180
ggaccccaat	atcccattta	tgctattgcc	ctgaagaata	atcagaagag	cgggcccctg	240
attggaagg	aaaagacaga	cgaacttccc	caactggtaa	ccctccaca	ccccaatctt	300
catggaccag	agatcttgg	tgctccttcc	acagtccaaa	agccccctt	cgtcacccac	360
cctgggtatg	acactggaaa	tggtattcag	cttctgggca	ctctgggtca	gcaacccagt	420
gttggggcaac	aatgatctt	tgaggaaat	ggttttaggc	ggaccacac	gcccacaacg	480
ggcaccnca	taaggatag	gccaagacca	taccccgccg	aatgtaggac	aagaagctct	540
ntctcaaca	ccatctcatg	ggccccctt	caggacactt	ctgagtacat	catttcctct	600
catcctggtg	ggcacttgat	gaanaacct	tacagtlcag	ggttcttgg	actctacca	660
gnccacttc	tgacagganc	ttggcgnga	ccacct			697

<210> 244

<211> 373

<212> DNA

<213> Homo sapien

<400> 244

cgctgggtc	cgccnaggc	ccattttctc	ctgacgggc	ccactctct	ccalcttct	60
agttcacacc	attgtcatgg	cccatctag	atqantcaca	tctgaaatga	cccttccaa	120
agcctaagca	ctggcacacc	agtttcaagc	ctgattcaga	calctgttcc	cactcatctc	180
caacggcata	atgggaaac	gtctagggt	caagccagca	gcatccgta	ggttgggtca	240
agccttctgt	gacaggttg	ccccggtaa	caactcttc	ccgancccta	tgcctctgt	300
ggtttttcag	tgcctccact	atgatgtgt	aggtggcacc	tctggtgagg	acctgcccgg	360
ggggcccgct	cga					373

<210> 245

<211> 307

<212> DNA

<213> Homo sapien

<400> 245

agcgtgggtc	cgcccgagg	gtgccccaga	ccaggaccta	ggttccgacg	ttggccctgt	60
ctgcttctct	taaacctcc	ccatcccaac	ctggtctcc	cccccccaac	caactttccc	120
ccccccccgg	aaacagacaa	gccccccca	ctgaaccccc	tcaaaaagcc	aaacatggg	180
agacacattc	acatggactt	tggaaaatat	tttttcccll	lccattcctc	tctcaaacct	240
agtttttctc	tttgacacac	cgaacatgac	caaaaaccca	aagtgaacctg	cccgggcggc	300
cgtctga						307

<210> 246

<211> 372

<212> DNA

<213> Homo sapien

<400> 246

tcgagcgggc	gcccggggag	gtctcacca	gaggtgcacc	ctacaacatc	atagtggagg	60
cactgaaaga	ccagcagagg	cataagggtc	gggaagagg	tggtacgghg	ggcaactcgh	120
tcaacgaagg	cttgaaccaa	ctacagggtg	actcgtgctt	tgaacccctac	acagtttccc	180
attatgcctg	tgaggatgag	tgaggacgaa	tgctgcatc	aggctttaaa	ctgttgtgcc	240
agtgatttag	ctttggaagt	ggtcatttca	gatgtgatl	ctctagatgg	tgcctgaca	300
atggtgtgaa	ctacaagatt	ggagagaagt	gggacccgta	gggagaaazl	ggacctcggc	360
cggacccag	ct					372

<210> 247
 <211> 348
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(348)
 <223> n = A,T,C or G

<400> 247
 tcgagcggcc gcccgggcag gtaccgggnt ngtcagcgag gggccattca cactgaactt 60
 caccatcacc accctccggl atgaggagaa catgcagcac cctgggtcca ggaagttcaa 120
 caccacggag agggctcttc agggcctgct caggtccctg tccaagagca ccaagtgttg 180
 cccctctgtac tctggctgca gactgacttt gtcagacct gggaaacatg gggcagccac 240
 tggagtggac gccatctgca acctccgct tgatccacat ggttctggac tggacanana 300
 gcggctatac ttgggtgctg anccnaacct ttggcgggga cncnctt 348

<210> 248
 <211> 304
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(304)
 <223> n = A,T,C or G

<400> 248
 gaggactggc tcaagctccca gtatagccgc tctctgtcca gtccaggacc agtgggatca 60
 aggcgggggg tgcagatggc gtccactcca gtgggtgcc cagtgttctc aagtctgagc 120
 aaagncagtc tgcagccaga gtacagaggg ccaacactgg tgcctctgca cagggaactg 180
 agnaggccct gaaggacct ctccgtggtg ttgaaattcc tggagccagg gtgctgcatg 240
 ttctctcat accgcaaggt gllgatgctg aagttcagtg tgaatggctc ctccgtgacc 300
 accc 304

<210> 249
 <211> 400
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(400)
 <223> n = A,T,C or G

<400> 249
 agcgtggctg cggccgaggt ccaccacacc caattccttg ctggtatcat ggcagccgcc 60
 acgtgccagg attaccggt acatcatcaa gtatgaaag cctgggtctc ctcccagaga 120
 agtggctcct cggcccgacc ctgggtgcaa agaggtact attactggcc tggaaaccgg 180
 aaccgcatat acaatttctg tcaatgacct gaagaataat cagaagagcg agcccttgat 240
 tggaaaggaa aagacagacg agcttcccca actggttaacc ctccacacc caattctca 300
 tggaccanac ancttggatn gtcctttcac nggttnaaa aaccttctc gcccccacc 360
 ctgggggatt aaccttggga aagggggatt tncatttcc 400

<210> 250
 <211> 400
 <212> DNA
 <213> Homo sapien
 <220>
 <221> misc_feature
 <222> (1)...(400)
 <223> n = A,T,C or G

<400> 250
 tcgagcggcc gcccgggcag gkctgtcng agtggcctg gtagaagllc caggaaacct 60
 gaactgtatg ggttcttcat cagtgcacac aggatgacat gaahhgtatg actcagaggt 120
 gtcttggatg ggggcccatt agatggttg ntgagagaga gttcttctg ctacattcgg 180
 cgggtatggt cttagcctat gctttatgg ggtggccctt gtggcggtg tggtcggct 240
 aaanccatgt tctcacaaga tcatctgttg cccacactg ggttgctgac cagaagtgc 300
 aggaagctga ataccatttc cagtgtcata ccccgggngg gtgacnaag ggggtcttt 360
 ngacctggng aaaggaacca tccaaaacct ctgncccatg 400

<210> 251
 <211> 514
 <212> DNA
 <213> Homo sapien
 <220>
 <221> misc_feature
 <222> (1)...(514)
 <223> n = A,T,C or G

<400> 251
 agcgtggncg cggccgaggt ctgaggatgt aaactcttcc caggggaagg ctgaagtgt 60
 gaccatgggt ctactgggtc cttctgagtc agakctgtga ctgatngaa ctgaagtagg 120
 tactgtagat ggtgaagttt gggtaglccc aatgtctga tctccagagc ctccatct 180
 taccgtttct tcttttctta tgggatgaga cactgttyag tttctctaa agtcaccact 240
 gaaatcttcc tccaaaggaa aacctgtgga aaagccctct attctgccc cataatttgg 300
 ttctcttaak cttctctgaa tcaactallc cctggaangt ttgggaaaaa nngggonacc 360
 tgnantgga aattggatan aaagtccca ccatcttacc caccnagcag aaagtggaa 420
 nggtacgaa aagctccaag taanaaaaag gaggcagta aaggtcaagt gggcaccagt 480
 ttcaacaaa actttcccca aactatanaa ccca 514

<210> 252
 <211> 501
 <212> DNA
 <213> Homo sapien
 <220>
 <221> misc_feature
 <222> (1)...(501)
 <223> n = A,T,C or G

<400> 252
 aagcggccgc cgggcagcn ncagagtgc cttagggact gggntacccc ccaggtctgc 60
 ggcagtgtgc acagcgccag ccccgctggc ctccaaagca tgtgcaggag caaahggac 120
 cgagatattc ctcttgccac tgttctctta cgtggtatgt ctcccatca tcttaacag 180
 ttgctctatg aggttcacac ttgaattct cttttcgtt cccagacal gtgcagctca 240

```

tttgggtggc tcttatgttt ggggaaagtt tcttgaaact gtgccaactga cctttacttc 300
ctctctctct actggagctt tccgtacctt ccactctctgc tgnitggnaa aagggnngaa 360
cctcttatca atttcatctg acagtancoc cctttctncc caaaaatnc aagggaasat 420
attgattncc aagagggatt aagggaacac ccaattatg ggggcccaga ataaaagggg 480
ctttccaca ggttttttc k 501

```

<210> 253

<211> 226

<212> DNA

<213> Homo sapien

<400> 253

```

tcgagcggcc gcccgagccg gtctgcaggg tattctangt gttctgagca catatgagat 60
aacctggggc aagctatgat gttcgatacg ttangtctat taastgcct tttgaactgcc 120
atctcagctg atgacagcct tctcactgac agcagagatc ttectcactg tgccagtggg 180
caggagaaa aguatgtctg gactggacct cggccgggac cagct 226

```

<210> 254

<211> 226

<212> DNA

<213> Homo sapien

<400> 254

```

agcgtggctg cggccgaggt ccagtcgcag catgctcttt ctctgcaca ctggcacagt 60
gaggaaagtc tctgctgtca gtgagaaggg tgcctccac tgagatggca gtcaaaagtg 120
catttaatcc acctaacgta tcgaacalca tagcttggcc caggttatct catatgtgt 180
cagaacaact acaatagcct gcagaacctg cgggcccggc gctega 226

```

<210> 255

<211> 427

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (11... (427))

<223> n = A, T, C or G

<400> 255

```

cgaaggggca gccgggggag tccgaactcc aatccagaga accaaagggc agatgttcag 60
aagctacacc atcacaggtt tacaaccagg cactgactac aagatctacc tgtacacct 120
gaatgacaat gctcggagct cccctgtggt cctcggccgc tccactgcca ttgatgcacc 180
atccaacctg cgtttcctgg ccaccacacc caattccttg ctggtatcat gccagccgcc 240
acgtgccagg attacgggcl acatcaalca qtatgagaag cctgggtctc ctcccagaga 300
agtggtccct cggcccccgc ctggtggnac agaagctact attactgccc tggaaaggg 360
aacgaatat acaatttatg tcattgcctt gaagaataal ccaaaagacc agccctgat 420
tgaagg 427

```

<210> 256

<211> 535

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (535)

<223> n = A, T, C or G

<400> 256

agcgtgggtcg	cgcccgaggk	cctgtcagag	lqgcactggg	agaaqttoea	ggaaacctga	60
actgttgggg	ttcttcatca	gtgccaaacg	gacgacatga	aatgatgtac	tcagaagtgt	120
cctggaaatgg	ggcccatgag	atggltgtct	gagagagagc	ttcttgtact	gtctttttcc	180
ttccaatcag	gggtctgctc	ttctgattat	tcctcagggc	aatgacataa	attgtatatt	240
cggttcccg	ttccaggcca	gtaatagtag	cctctgtgac	acagaggcgg	ggccggaggga	300
ccacttctct	gggaggagac	ccaggcttct	catacttcat	gatgtanccg	gtaatcctgg	360
caccgtggcg	gctgccaatg	tauccagcaag	gaattgggtg	tggtggccaa	gaaccgcagc	420
ttggatgggt	catcaatggc	agtggaggcg	tcgatnacca	caaggaggct	ccgancattg	480
tcattcaagg	tggacaggta	gaatcttcta	atcaggtgac	tggtttgtaa	acctg	535

<210> 257

<211> 544

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (544)

<223> n = A, T, C or G

<400> 257

tcgagcggcc	gcccggggcg	gtttcgtgac	cgtgacactc	aggtggacac	cacctccaa	60
agcctgagcc	agcagatcga	gaacatccgg	gcccagagg	gcagccgcac	gaacccccc	120
cgcacctgcc	gtgacctcaa	gatgtgccac	tcctactgga	agagtcagga	gtactggatt	180
gaccccaacc	auggtgcaa	cctggatgcc	atcaaaqlct	tctgcaacat	ggagactggg	240
gagacctgcg	tgtaccccaa	tcagcccagt	gtggcccaga	agaactggta	catcagcaag	300
aaaccccaagg	acaagaagca	tgtctgggtc	ggcgaaagca	tgaccgagcg	attccagtto	360
gagtatggcg	gcccggggctc	cgacccctgc	gatgtggacc	tcggcccgga	ccacgctaag	420
cccgaaattcc	agcacactgg	cggccgttac	tagtgggata	cgagcttcgg	taccaagctt	480
ggcgtaataca	tgggncatag	ctgtttctct	agtgaaaatg	gtatttcgct	tcacaatttc	540
ccac						544

<210> 258

<211> 418

<212> DNA

<213> Homo sapien

<400> 258

agcgtgggtcg	cgcccgaggk	ccacatccgg	aggttcggag	ccctgggcgc	catactcgaa	60
ctggaaatcga	tcgggtcatgc	ttctgcagaa	ccagacatgc	ctcttgtcct	tggggttctt	120
gctgatatga	cagttcttct	gggcccact	gggttgagtg	gggtacacgc	aggtctcacc	180
agtctccatg	ttgcagaaga	ctttgatggc	atccaggctt	cagccttggg	tggggtccat	240
ccagtactct	ccactcttcc	agtcagagtg	gcacatcttg	aggtcacggc	aggtccgggc	300
ggggttcttg	cggtcgccct	ctgggctcgc	gatgttctcg	atctgcttgc	tcnagctctt	360
gaagggttgg	gtccacatcg	aggtcacggg	cacgaacact	gcctggggcg	ccgtctga	418

<210> 259

<211> 377

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{377}

<223> n = A,T,C or G

<400> 259

agcgtggtcg	gggcggaggt	caagaacccc	gcccgcacct	gcccgtgacct	caagatgtgc	60
cactctgaat	ggaagagtgg	agagtacttg	altgacccca	accaaggttg	caacctggat	120
gccatcaaa	tcttctgcaa	catggagact	ggtgagacct	gcglgtaccc	cactcagenc	180
agtgtggccc	agaagaactg	gtacatcaga	aagaaccccc	aggacaagag	gualgtcttg	240
ttcggcgaga	gcataaccca	tggattccag	ttcgagtatg	gcgcccaagg	ctccgacctt	300
gcccgtgttg	acctgcccgn	gcccgnccgc	tcgaaagacc	caatttccc	gncacacttg	360
gcccgtggtt	actactg					377

<210> 260

<211> 332

<212> DNA

<213> Homo sapien

<400> 260

tggaggggac	gcccgggacg	gtccacatcg	gcagggtcgg	agccctggcc	gccatnctcg	60
aactggaatc	catcggtcat	gtctctcgcc	aaccagacac	gcctcttctg	cttgggggtc	120
ttgctgatgt	accagttctt	ctggggccaca	ctgggtctgag	tggggtacac	gcagggtctca	180
ccagtctccc	tcttgcagaa	gactttgatg	gcctccaggt	tgcagccttg	gltgggggtca	240
atccagtaat	ctccactctt	ccagtcagag	tggcacatct	tgaggtcccg	gcagggtgagg	300
gaggggtttt	tgaactcggc	cgcgaccacg	ct			332

<210> 261

<211> 94

<212> DNA

<213> Homo sapien

<400> 261

cgagcggcgg	cccgggcagg	ttccccccct	tttttttttt	tttttttttt	tttttttttt	60
tttttttttt	tttttttttt	tttttttttt	tttt			94

<210> 262

<211> 650

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {1}...{650}

<223> n = A,T,C or G

<400> 262

agcgtggtcg	gggcggaggt	ctggcattcc	ttcgacttct	ctccggccga	gcttcccaga	60
acatcacata	tcactgcasa	aatagcattg	catacatggg	tcaggccagt	ggaaatgtaa	120
agaaagggct	gaggtctgat	gggtcaaatg	aangtgaatt	caaggctgaa	ggaaatagca	180
aattcaccta	cacagttctg	gaggaaggtt	gcacgaacaa	cactggggaa	tgggcgaaa	240
cagtctttga	atatcgaaac	ggcgaaggtg	tgagactacc	tattgtagat	attgcacctt	300
atgacattgg	tgttcttgat	caagaatttg	gtgtggacgt	tggcctgttt	tgttttttat	360
aaaccaaact	ctatctgaaa	tcccaacaaa	aaattttaa	ctccatatgt	gntcctcttg	420
ttctaatctt	gggaaccagt	gcaagtgaac	gacaaatctc	caattattta	tttcccaaat	480

```

gtttggaac agtataattt gacaaagaaa aaaggatact tctctttttt tggctgggtcc 540
accaaataca attcaaaagg ctttttgggt ttattttttt anccaattcc aatttcaaaa 600
tgtctcaatg gngcttataa taaataaac ttccacctt ntttttngat 650

```

<210> 263

<211> 573

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(573)

<223> n - A, T, C or G

<400> 263

```

agcgtgggtc cggccgaggt ctgggatgct cctgctgtca cagtgggata ttacaggatc 60
acttacggag aaccaggagg aatagacct gtccaggagt tcaactgtgc tgggagcaag 120
tctacgcta cctcagccg ctttaaacct ggagttgalt ctaccatcac tgtgtatgct 180
gtcactggcc gtggagacag ccccgcaagc agcaagccaa ttccattaa ttaccgagca 240
gaaattgaca aaccatccca gatgcaaglg accgatgttc aggacacacg cattagtgtc 300
aagtggctgc ctccaattc cctgttaact ggttacagaa gtaaccacca ctcccaaaaa 360
tggaccagga ccaacaaaaa ctaaaactgc aggtccngat caaacagaaa atggactatt 420
gaaagcttgc agnccacagt ggaaglatgt gnttagngt ctatgctcac aatccccagc 480
cggagaaagt cagccttctg gttagactg cagtaaccaa cattgatcgc cctaaaggac 540
tggncattca cttggatggg ggatgtccaa ttc 573

```

<210> 264

<211> 550

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(550)

<223> n - A, T, C or G

<400> 264

```

tcagagggcc gcccgggccg ntcccttgcc ctctgcagng tttctcttcc catccgggtg 60
agggaatagc tcatggattc catcctcagg gctcgaatcg ntcacctgt acctggaac 120
ttgccctgt gggtttccc aagcaatttt gahghaatcg acatccacat cagngaagtc 180
cagtccttta gggcgatcaa tgttggltac tgcagttctg accagagget gactctctcc 240
gtthggaltc tgaagcatag cackaaccaa atactccact gtgggntgca agcttccat 300
agtcatttct gttagatctg gacctgcagt ttttaagttt tgggtggtct gttccatttt 360
tgggaagtgg ggggttactc tgtaaccaag aacgggggaa cttgaaggca gccacttgac 420
actaatgtct ttgtcttgaa catcggkcaa ttgcattctg ggatggtttt gacaatttct 480
gattcggcaa attaatgga attgaccttg tcttggcgg gctqnetcc aagggccagc 540
gacagcatac 550

```

<210> 265

<211> 596

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> {}... (596)

<223> n = A, T, C or G

<400> 265

tccagcggcc	gcccgggcag	glccttgccag	ctctgcagtg	tcctcttcac	cctcaggtgc	60
agggaatagc	tcacggatcc	cctcctcagg	qntccagtag	gtcaccctgt	ccctggaaac	120
ctcccccgtg	gggtttcc	aagcaattt	gatggaccg	acatccacat	cagtgaalgc	180
cagtccttta	ggcgatcaa	tgkhyttac	tgcagtctga	accagagct	gaatctctcc	240
gcttggtatc	tgagcalkga	cactaacac	alcctccact	glgggtgc	agccttcaat	300
actcctttct	gtttgctctg	gacctgcagt	cttaagttti	tgttgacct	gncctatttt	360
tggggaagg	gtggttactc	ttgtaaccag	taacagggga	acttgaagca	gccacttgac	420
actaatgtg	gtggcctgaa	cacgggtcac	ttgcctctgg	gatggattgg	tcaatttclg	480
ctcggtatth	acttgggact	tggcttactg	gcttgcgggg	gctgtctcca	cgggacttga	540
caagcataca	caggngatgg	gtataatcaa	ctccaggtti	aggccnctg	atggtt	596

<210> 266

<211> 506

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (506)

<223> n = A, T, C or G

<400> 266

agcgtgtctg	cggccgaggt	ctgggatgct	cctgctgtca	cattgagata	ttacaggatc	60
acttcttggg	aaacgggag	acttggccct	gtccaggggt	tcactgtgct	gggagggag	120
tctacagcta	cctccaggg	ccttaaacct	ggagttgatt	atacccttgc	tgcgtatgct	180
gtcactggcc	ctgggagcag	cctcgcaagc	qgtaagccaa	tttccattca	ttaccgaaca	240
gaaattgaca	aacttcttca	galtgcaagt	accgalttgc	aggacaacag	catttctgtt	300
acttgggtgc	cttcaagttc	cctgtttact	ggtlccagag	taaccaacac	tcccaaaact	360
gggaccagga	cacacaaaa	actaaaaact	ccttgcctcag	alccacacag	aatgactatt	420
gaaggcttgc	agccacagct	ggagtatgtg	qnttagtctc	lcttctcaga	atnccaagcg	480
gagagagta	gcctctggtt	cagact				506

<210> 267

<211> 548

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (548)

<223> n = A, T, C or G

<400> 267

tccagcggcc	gcccgggcag	glccttgctc	tcaggacgtc	accacccagg	acttgggtct	60
gtctcttclg	acctctctca	ctcaggggac	aggttctctg	gcccctctg	cctgactca	120
qctccctcc	gggtccgggt	ctctgggac	gtcagtcac	atctcttgc	ctggacacag	180
cagtgaagtt	ggtgcttctg	acttctctc	ctggtaacaa	caacacccag	qccagggccc	240
caaacctcag	atttcttggg	tcactaagcg	gccttccagg	glccttctgc	qcttctctg	300
ctccctctct	qgcaacacgg	cctccctgac	cttctcttgg	ctccctctg	aggatgagc	360
lqattattac	tggagctca	tatgcaggca	acaacaattg	qnttctctgc	ggaagggac	420
agctgacccg	tnctaaaggt	aagccacag	cttgcacccc	tgggtcactc	cttccccc	480

ctctcttgaa gaagctlllca agccaacaa gncacactgg gtgtytctca taagtggact 540
ttctaccc 548

<210> 268
<211> 584
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(584)
<223> n = A,T,C or G

<400> 268
agcgtggtcg cggccgaggt ctgtagcllc tgtgggaatt ccactgctca ggcgtaayq 60
tcaggtaget gctggccggc tacllqttgt tgccltqntt ggagggtgtg gtgghctcca 120
ctcccgcllc gacgggghq ctctctgccc tcccgccac lqtcacgggt cccgggtaga 180
aghrctttat gagacacccc agtgtggccc lqttggettq vaggctctca gaggagggtg 240
ggaacagagt gaccgagggg gcagcccllqy gctgaccllq gaaggtcayc ttggtccctc 300
cgccgaacac ccaattgttg llguchgcac atgagctgca gtaatlactca gctcalmtl 360
cagcclggag ccccgqgqcn qtcaggggag gcccgtgttt gncagqnotc ggagcgayq 420
naagcgatca gggacccctg agggccgcll taongaccll vanaaatcat gattttgggg 480
ggcctttgce tgggngtttg llqutnacca gnaaaacaaa atttcatana gcaccaactg 540
caclqthqgt tccagtgca nqaanatggt gaactgaant glnc 584

<210> 268
<211> 368
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(368)
<223> n = A,T,C or G

<400> 268
agcgtggtcg cggcgayqll cccagatcag gaccccccgc ctgcccgccll tggctcatgc 60
ctttclllll ghggcttqaa ccagtgtcat caaktgcag tagccagact gcoqtctcca 120
ctgctqtrtt atnagtctgc agcttcacag cccatggctc ccaatgtccc agttctctca 180
tqtccaccaa agtaccctgc tcaccattla cccccaggl cccacagttc tcttggglgt 240
gcttggcccg aaggggagta agtanacqqa tgggtgclnt ccacacagttc lqratcaggg 300
tacgaggaat gacclcllqy gctbqgqna caagccctgt atggacntgc ccggcggggc 360
ccgclcga 368

<210> 270
<211> 368
<212> DNA
<213> Homo sapien

<220>
<221> misc_feature
<222> (1)...(368)
<223> n = A,T,C or G

<400> 270

```

tegagcggcc gcccggtcag gtccatacag ggcctgllccc caggccctag aggcacttcc      60
ttgtaccttg alcccgaact gtgggcccag caccatccgt ctacttacct cctttcgggc      120
cagccacccc caggagaact glgagacctg ggtgtgaaat gngagacgg ghuetttggt      180
ggacatgaag gaactggga tacgggagcc attggctgng aagctgcana cttataagac      240
agcagtggag acggtcagtc tgcctactgc aattgtatga atcglttcan gccacaaaa      300
gagagggggt gaccanagcc ggcaaggggg ggttctctga tgcctgacct cggccgctga      360
ccacgctt                                     368

```

<210> 271
 <211> 424
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> [1]... (424)
 <223> n = A,T,C or G

```

<400> 271
agcgtggtcg cggccgaggt cccctagagg tctctgtgac attgcccaag cagagtctct      60
gggtllcccc ctctatagag ggtttgctgt gnggagggac tgcctatggt tgcgcgggt      120
cctctggag agtggggcca aaggttgcga ggttgtgglg tctgggaac tccgagggcc      180
gagggctaaa tccatgaagt llglggtatg cctgtatgac cacagcggag acccgtttaa      240
ctctacgllt gccctgtctg tggccacagt gltctcana caggglgtgc tgggcacaa      300
ggtgaagatc atgttgcctt gggacccanc tggcaaaaat ggcctttaa aaccctttgc      360
ontgaccacg tgaaccattt gtgnganccc caagatgann atacttgcce acccctttgc      420
attc                                     424

```

<210> 272
 <211> 541
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> [1]... (541)
 <223> n = A,T,C or G

```

<400> 272
tcagagcggcc gcccggtcag gtctgccaaq uagacctgt taactctctg ggaactggctg      60
gggcacggca ggcggctctg gcttccccc ottctglttc gaggatgggg tggtagggcag      120
tatctcatct ttggglhupa ccttctctac gtggkccagg aggggcttct lgggucacac      180
cttaccagltt ggttcccagg gcagcatgat ctccaccttg atgcacagca caccctgtct      240
gagcaacacg tgggcacag cagtgtcaac ctatagttta acaggtctct cgtgtggat      300
catcaggcca tccacaaact tcatggattt agcctctgl cctcggagtt tcccaaaaca      360
ccacaacctc gccagcclltt ggggcccact tcttcckqna tgaacccgca gnaaccctt      420
ancaaggccc ltcagacacg gnaagccctt cclnaggagt tttgtaaain ccaaaaactc      480
ltgctctggg ccaatgggca cacagacctn kntnaggacc ttgggcccgg aaccacccgt      540
t                                     541

```

<210> 273
 <211> 579
 <212> DNA
 <213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (579)

<223> n = A, T, C or G

<400> 273

agcgttggtg	cgcccgnggt	ctggccctcc	lgcgaaggct	ggtgaggtg	gtcaccctgg	60
aaaaccogga	cgacctggtg	agagaggagc	tggtggacca	caagggtgctc	gtggcttctac	120
tggaaactct	ggacttcttg	gcttcxaagg	catttagggg	cacaatggtc	tgatggatt	180
gaagggaacg	cccgggtgctc	ctgtgtgtgaa	gggtgaacct	ggngcccttg	gtgaaactgg	240
aactccaggt	caaacaggag	cccgngggtc	tcctggngag	agaygacgtg	ttggtgccc	300
tggcncanac	ctgcccgggc	ggccgctcna	gaagccgaaa	tcagnacac	tgccggcccg	360
tactantgga	ntccgaactt	cggtaccaaa	gcttggcgt	aactatggcc	atgcttgtt	420
ccctggggng	gaatttgta	ttccgtnc	gattccacac	aaataccga	accgggaag	480
cattnaagtg	taaaagacct	gggggngcct	aaatganylg	agntaactc	ncalttaact	540
ggcgttgccc	ttcaactccc	cgtttttcca	gtccgggna			579

<210> 274

<211> 330

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (330)

<223> n = A, T, C or G

<400> 274

tcgagcggcc	gcccgggcag	gtctggggca	ggggcaacna	cacgtccctc	ctaccaggga	60
agcncacggg	ctctgtttg	acctggagtt	ccatttccac	caggggcacc	aggttcaccc	120
ttcancacag	gagcaccggg	ctgtcccttc	aalccctcca	gaccattgtg	ncacctaatg	180
cctttgaagc	caggggttcc	aggagttcca	ttgaaaaccac	gagcaccctg	tggtcnaaac	240
actcctctct	caccaggtcg	tcagggtttt	ccaggggtgac	cattcttccc	agccttccc	300
ggagggccag	acctcggcgc	cgnccacgct				330

<210> 275

<211> 97

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (97)

<223> n = A, T, C or G

<400> 275

ancgtgtgtcg	cgcccgnggt	cctcaccagc	ggtgncacct	acacactcct	ggtgggngcc	60
ctgaagagcc	ancagaggtc	caagggttcg	gaagagg			97

<210> 276

<211> 610

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature
 <222> (1) ... (610)
 <223> n = A, T, C or G

<400> 276
 tegagcgggc gcccgggcag gtccatttcc tccclgacgg tcccacttct ctcccatctt 60
 gtagttcaca ccattgtcat ggcaccatct agatgataca catctgaaal quccacttcc 120
 aaagctcagg caactggcaca acaglllhuu ggcctgattca gacatctcgtt cccactcacc 180
 tccaacggca taatgggaaa ctgtgtaggg gtcaaaagac gaggtaatccg taggllggtt 240
 caagccttcg ttgacagagt tgtccacggc aacacactct tcccgaaact latgcctctg 300
 ctggtctctc agtgnctcca ctatgatgll gtagggtgca cctclggtag ggaactcngn 360
 ccngaacaaac gcttngccc qnattctqca gaataatccc alccacacttg ggggcctctt 420
 cgaacatgca tcntaaaagg ggcaccaatt tcccccclat agnggaancc gtatllmaga 480
 atttccactq nccngccgnt ttacaaaacg ncggtgaact ggggaaaaac cctggcggtt 540
 acccaacttt aatgcgcctt ggcggcncac tcccccttt lmgccanccn tgggcgtaaa 600
 laaacgaaaa 610

<210> 277
 <211> 38
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (38)
 <223> n = A, T, C or G

<400> 277
 ancgnggtcg cgcccgangt nttttttctt nttttttt 38

<210> 278
 <211> 443
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1) ... (443)
 <223> n = A, T, C or G

<400> 278
 agcgtggtcg cgggcyaggt ctgagggtac atgctgtggt gtggacgtga gccacgaaga 60
 cctgagggtc aagttcaact qylacqfuga ccgogtggag gtgcataatg ccaagacaaa 120
 gccgcgggag gaggagtaca nccgcacgta ccggngggtc agcgtcccca ccgtccctga 180
 ccagaatttg ttgaatggca aggagtacaa gngcaaggll kccacacaaq ccntcccggt 240
 ccccttcgaa aaaaacattt ccaagcccaa agggcagccc cagagaaccac aggtgtacac 300
 cctgcccana tccggggggy aaaagahcaa naacccnggt cagccttaac ttgcttggtc 360
 naangctttt tatcccaact nactctcccc ntggaantgq gaaaaaccaa kgggccaaac 420
 cgaasaacaa ttacaanaac ccc 443

<210> 279
 <211> 348
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (348)
 <223> n = A,T,C or G

<400> 279
 tcagagcggcc gcccgggcag gtglaaggagt ccaqcaacggg aynogtggtc ttglaagttgt 60
 tctcgggtg cccattgctc lncacactca cggcgatgctc nctgggatag aaqcccttga 120
 ccaqgaaggl caggctgccc tggttcttgg tcactctctc cggggatagg ggcaggggtga 180
 acacctgggg ttctcggggc ttgccclbtg gtttlqnana tggltttctc gatgggggtc 240
 ggaagggctt tgttgnaaac nktgcacttg actccttgcc ctcaaccag ncttggngca 300
 ggacgggggg gacnctnacc ncccggaacn gggtggtlgn actgtccc 348

<210> 280
 <211> 149
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (149)
 <223> n = A,T,C or G

<400> 280
 agcgtggtcg cggacgaggt cctgtcagag tggnaactggl uyaagttcca ngaaccctga 60
 actgtaaggg ttcttcacaa gtcgcaacng gatgacntga aatgatgtac lncggaagngn 120
 cctggaalgg ggcacalgau atggttgc 149

<210> 281
 <211> 404
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (404)
 <223> n = A,T,C or G

<400> 281
 lncagcagnc gcccgggcag gtccaccaca nccaattcc lqcttggtatc atggcagccg 60
 cccogtgcca ggattaccgg ctacatcnc aagtatgaga agcctgggtc tectcccaga 120
 gaagtggctc ctgggcccc ccttqgtgtc acagaggtca ctattactg cctggagncg 180
 ggaaccgaat alcaactttt tqtcatggc clqaagaata atcagagag cagagccctg 240
 atttggagga aaaaagacaga cgaacttccc caactggta ccttcacaa ccccaatctt 300
 catggaccag agatcttggg tgtlccctcc acagtlcann agacccttt cggcaacccc 360
 cctgggtatg aactlggga ncnqnanntt aacttctcc ggca 404

<210> 282
 <211> 507
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (507)

<223> n = A, T, C or G

<400> 282

agcgttggtcg	cgcccgaggc	ccggcgtgct	ccctgctgca	ccttgagata	lccaggatc	60
acttacggag	aaacagggg	aantagccct	gtccaggagt	tcactgtgcc	tgggagcau	120
tctacagela	ccatcagogg	ccctaaaccl	ggagttgatt	ataccalnc	cgtgtal.gct	180
gkcccgggcc	gtggagacag	ccccgcaagc	agcaagccaa	tttcccttna	ttaccgaaca	240
gaaattgaca	aaccatccn	gctgcaagt	acaggtgttc	aggacaacag	cattagtgtc	300
aagtggctyn	cttcaaggtn	ccctggtacl	gggttacaga	ntaaccacn	ctcccaaaa	360
tggaccagga	accacaaaa	ctt.aauctgc	agggctccaga	tcaaaacaga	aatgactatt	420
gaangcttgn	agccacacgt	gggagtaign	gggtagtgn	latgcttcag	actccaagcg	480
aaaaaangtc	aagccttntg	ggttcaa				507

<210> 283

<211> 325

<212> DNA

<213> Homo sapien

<220>

<221> misc feature

<222> (1)...(325)

<223> n = A, T, C or G

<400> 283

togagcggcc	gcccggggcag	gtccctgcag	ccctgcaagt	tcclcttenc	cctcaggcgn	60
agggaaatgc	tcattggattc	cctccclcag	gctogagtag	gtcaccctgt	acctggaaa	120
ttgccctgt	gggcltcccc	agggcatttt	gatggaacln	ccatccacat	cagtgaatgc	180
cagkccctta	gggagatena	tcttggttac	tgcaynetga	accagaggcl	gactctctcc	240
gcttgagctc	tgagcataga	cactaaccac	alautccact	gtgggctgca	anccttcaat	300
aannccattc	tgcttgatct	ggacc				325

<210> 284

<211> 331

<212> DNA

<213> Homo sapien

<220>

<221> misc feature

<222> (1)...(331)

<223> n = A, T, C or G

<400> 284

togagcggcc	gcccggggcag	gtccggtggg	gtccctggcac	aaagcccatgg	gggngttgnt	60
ctnatccagc	tgctccagcct	ccatlgggca	gtttgagaaa	gtgtgcagca	atgacacana	120
nacccttcag	lcttccctgc	acttctttgc	cacaaagcln	acctggagg	gacccaagaa	180
gggcacaaa	ctccacctgg	actacntogg	gcttgcana	tacatccccc	cttgcctgga	240
clctgagctg	acgaattcc	ccctagcgca	tgngggactg	gcacaaqna	cgtccctggca	300
ccttctgtatg	anagggatga	agacacnaaa				331

<210> 285

<211> 509

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature
 <222> (1)... (509)
 <223> n = A,T,C or G

<400> 285

agcgtgggtcg	cgcccgaggt	ctgkctana	gtctctnaga	ctctactccc	hacgcagcgt	60
ggtgacccgtg	ccctccagc	cttcgggac	cccgccctac	acctgcann	tgatcacaa	120
gcacacacac	acccaggtg	acaagagagt	lqagcccaaa	tcctgkqaa	aaactccan	180
atgccacacg	tgccagcac	ctgaactct	ggggggacg	hantcttcc	tcctccccc	240
caccccccct	ccaaacctgc	cgggggggac	gtccgaaagc	cgaattccag	ccacctggcg	300
gcccgtacta	gtggnccna	acttggnanc	caacctggng	gaantaabng	gcataacctg	360
ttctcggggg	gaaattggt	tcngtllan	aattccnca	caactacga	gcgggagca	420
tacaaagngk	aaagcclyg	qnggootan	tgaaglyng	ctaaactcac	cttattngc	480
gttgcgcctc	actggccgc	ttttccagc				509

<210> 286
 <211> 336
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (336)
 <223> n = A,T,C or G

<400> 286

tcgagcgggc	gcccgggcag	gtttggaag	gggclgngg	qngnqngna	gactgacgt	60
ccccccagga	gttcagggtc	cgggcacggt	gggcctngt	gagttttgtc	acaagatttg	120
ggclcaaccc	ctttgtccac	cttggtgttc	clggacttgt	gatctacgtt	gcaggtgcag	180
gtctqngngc	cysaagltgt	ggagggngng	gtcaccacgc	cgctgagggg	gtagagtccr	240
gaggaactga	ngacagagct	ggggcngnac	cacgctaagc	cgaattctgc	nyalalccar	300
cacactggcg	gcgctccga	gcatgcactt	tagagg			336

<210> 287
 <211> 30
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (30)
 <223> n = A,T,C or G

<400> 287

agcgtgggtcg	cgcccgaggt	ctgkctana				30
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<210> 288
 <211> 316
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)... (316)
 <223> n = A,T,C or G

<400> 288

tccgaggggccc	gcccggggcag	gcccacacatcg	gcagggttcgg	agccctgggccc	gcataactcg	60
aactggggttc	caccgggtcat	gctcttgccg	aaccagacat	gcclcttctc	cttgggggttc	120
ttgctgatgn	accagttctt	ctggggccacn	ctgggctgag	tggggtacac	gcagglctcc	180
ccagttctcca	tgttgagaaa	gactttgatg	gcattccaggt	tgcagctctc	gttgggggtca	240
atccagtact	ctccactctt	ccagtcagag	gcccacatct	tgggttcccg	gcagggtgcgg	300
gcgggggttct	tgacct					316

<210> 289

<211> 308

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (308)

<223> n = A, T, C or G

<400> 289

agccttgglcg	ggcccgagggt	ccagctcggg	gataanggtg	aaggctggcg	cccttgacct	60
ccaggtatac	ctgggcttcg	tggtggccct	ggtgagagag	glgaaatcg	ccctccagga	120
cctgctggtt	tccttggtgc	tcctggacag	aatgggtgaa	ctggnggtan	aggagaaaga	180
gggggtccgg	ntganaaagg	tgaaggaggc	ctctctgnat	tggcaggggc	cccangactt	240
aggggtggag	ctggccccc	tgcccccga	ggaggaaagg	gtgctgctgg	tcctcccggy	300
ccacctgg						308

<210> 290

<211> 324

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (324)

<223> n = A, T, C or G

<400> 290

tccagggggc	gcccggggcag	gtatggggcca	gaggggacaa	taggaccagt	aggaccacct	60
ggggatctct	tcctcggggc	accatcagca	cctggaccgc	ctgggtccca	cttcttccct	120
tttgagccag	gacttcacaa	acctctcttt	tctccaggga	ttccttgca	accaggagta	180
ccancagcac	caggtggccc	aggaggacca	gtaggacacct	ttctctcttc	gggaccaggg	240
ggaccagctc	cactctctag	tcctggggcc	cctggcaatc	caggagggcn	tccttccact	300
ttctcaccag	gagccctctt	ttct				324

<210> 291

<211> 278

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (278)

<223> n = A, T, C or G

<400> 291
 tggagcggcc gcccgggcag gcccacggg attattcggg gtctggcagg aatqngggc 60
 atccaggaatc agcagggagc cttgcaagc ctgaacgacc gcctggcctc ttacctggac 120
 agagtggagg gcctggagac cagacaacgg aggttgagga gcacacatcc ggagcacttg 180
 gagaagaagg gaccccgagt cagagcctgg agccattact tccagatcat cggaggcctg 240
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<210> 292

<211> 299

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (299)

<223> n = A,T,C or G

<400> 292
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 aacclacggc cattgccaat ctgcagaaag atgcgggcct tctccgcant atttcggaag 120
 acctgagggc ccaggccctc gatgatcttg aaglaanggc tccagctctc gacclgggcl 180
 ccttctctct ccagtgctc ccgggcltctg ctctccagcc tccggtlclc cgtctccaaq 240
 ncttctcact ctgtccaggc aacgagggcc ggcggnccat cagggctttt gcatngact 299

<210> 293

<211> 101

<212> DNA

<213> Homo sapien

<400> 293
 agcglygtcg cggccgaggt tgtacaagct tttttttttt tttttttttt tttttttttt 60
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<210> 294

<211> 285

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)... (285)

<223> n = A,T,C or G

<400> 294
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 tcttgggctc cagagtgctg tactcgttaa acacagatca tggatgttgt ctacaatgca 180
 totaataacg agctgggtcg taccagagac ctggcgaaga attgactcgt gctccttggc 240
 agcacaccgt accgacagtg ggtacccgag tccactatg cccct 285

<210> 295

<211> 216

<212> DNA

<213> Homo sapien

<400> 295

tcnagcggcc	gcrcggggcag	gtccaccaca	cccatttcc	tgctggtatc	nlggcagcgc	60
ccacgtgcc	ggattaccgg	ctacatccac	aatatgaga	agcctgggtc	tcctccca	120
gaagtggcc	ctcgggggc	ccctgggtc	acagagcta	ctattctg	cctggaacg	180
ggaacccaat	atacaattt	tgctattgc	ctgaag			216

<210> 296

<211> 414

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(414)

<223> n = A,T,C or G

<400> 296

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nnctctctg	attatttcc	agggcaanga	cataaattgt	atactgggt	cccggttcc	120
gnccatlaat	agtagcctct	nlgaacacag	ggcggggga	agggaccact	tcctcgga	180
gagacccag	ctctcatat	ttgatgata	agccggtant	ccnngcccl	ggcgcgctgc	240
catgataccn	ccanagaatc	gggtgtggg	gacctgcccg	ggcgggccgc	tcnagggcc	300
gacttctctg	aaantctct	atcacacttg	ggcgggcccg	tcgaaccatg	ctctctctct	360
ggcgcccat	ttcccccct	llaggggaag	ccncttctca	caattccac	ttgg	414

<210> 297

<211> 376

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(376)

<223> n = A,T,C or G

<400> 297

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ccnagccctc	ctggacctcc	tggtccccc	gggtccclca	gcgctgggtt	cgacttcagc	120
ttcttgccnc	agccacctca	aggggaagct	cnogctgggt	gcgctcccl	ccgggtgat	180
gatgccaatg	tgttttggga	ccgtgacctc	gaggtggaca	ccacccctca	gaggtctgag	240
ccagcagaat	cgaaacatt	gggaacccaa	gaagggggga	cccgcaagga	aaccccccnc	300
gcacclggcc	gngaacctcc	aggaaggtgc	ccctctcttg	acttggggga	aaagggaan	360
ntacttggcc	tlggan					376

<210> 298

<211> 357

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1)...(357)

<223> n = A,T,C or G

<400> 290


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ctgggaatcca tcggtcacgc tctgcgcgaa ccagacatgc ctcttgctct tgggtttctt    120
gctgatgtac caattctctt gggcncacac gggctgagtg ggtacacgc aggtctcac    180
agtctccatg ttgcagaaga ctttgatggc atccaggttg cagccttggt tgggttcaat    240
ccagtactct ccactcttcc agtcagaagc ggcacatctt gaggtcacgc cagggtcggg    300
gcgggggttct tggggctgc ccttctgggc tcccggaatg kctnnngaac ttctctgg    357

```

<210> 299

<211> 307

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (307)

<223> n = A, T, C or G

<400> 299

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ggtttacaaa ctcttagggc ggtctgctct ggggaggggc tcttatggtg tcttgagggt    120
ctctctggag agtgggggca aaagcttcca ggttgagggt tctgggaacc tccggggacc    180
gagggcttaa tccatggaat ttgtggaagg cctgatgac caccagcggg accctgttaa    240
ctactacgtt gaactttgct tgtgcggcac gtgttgctca acccaggggt ggttgggcat    300
caggggg

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<210> 300

<211> 351

<212> DNA

<213> Homo sapien

<400> 300

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tcgagcgggc gggggggcag gtctgccaag gagacctgt tatgtctgtg ggaatcgctg    60
gggcattggca gggggccttg gcttccacc cttctgttct gggatcggtg tgggtgggag    120
tatctcatct ttgggttcca caatgctcac gttgtcagga aggggcttct tagggccaat    180
cttaccagll ggttccaggg gcagcatgat ctccaccttg atgccagca caccctgtct    240
gagcaacacg tggcgccagg caagtctcaa cgtaaagtaa ttaaccaggt ctccgctctg    300
gatcatcagg ccctccacca ccttccagg tttacccttc tgtcctcgga g

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<210> 301

<211> 330

<212> DNA

<213> Homo sapien

<400> 301

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tcgagcgggc gggggggcag gtgtttcaga ggttttggag tccactgttg aggtcccagg    60
agtgtctggt gtgggcaacg ggttccagg ggtgnaacca ttgacataga gactgttctt    120
gttcagggtg taggggcccc gctctttgat gccattggcc agttggctca gctcccagta    180
cagccgctct ctcttgagtc cagggttttt ggggtcaaga tgaatgagtc aggtttccat    240
cactccagtc gctgctccat ccttctcgga cctgagagag gtccagtctg agccagagta    300
cagaggggca acactggtgt tctttgaata

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<210> 302

<211> 317

<212> DNA

<213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(317)
 <223> n = A, T, C or G

<400> 302
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 gctctgtgnc caccacccagc actcctggga cctggcagct ggatttggaa acctcagggg 180
 ctccatctct cctctccagc cccacaalla tggctgctgg cctctcctg gtaccattca 240
 ccccaactt caccatccac actctgcagt atggggagga catgggtcac cctgctcca 300
 ggaagtcca caccaca 317

<210> 303
 <211> 283
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(283)
 <223> n = A, T, C or G

<400> 303
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 ggtgctggct ggtanggggt gattacaggg ttgggagcag ctogtacact tgccattctc 240
 tgaatctaat ggttgaqlgag gtgagcctga cctctcttt ttg 283

<210> 304
 <211> 72
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc feature
 <222> (1)...(72)
 <223> n = A, T, C or G

<400> 304
 agcgtggtcg cggcggaggt gaggcacagg tgacccgggc tgaagctggg gctgctggnc 60
 ctgctggtec tg 72

<210> 305
 <211> 245
 <212> DNA
 <213> Homo sapien

<220>
 <221> misc_feature
 <222> (1)...(245)
 <223> n = A, T, C or G

<400> 305

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hgggggcagg	aggacccgac	tcacacccgtt	cacacgggtt	tcacacggga	ccagcaggtc	180
cagcaggacc	agcagcnc	gcttcgccc	ggtaacctg	ngctacctc	ggcggcnc	240
acgtt						245

<210> 305

<211> 246

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (246)

<223> n = A, T, C or G

<400> 306

lccggcgggtc	gcacggggcg	ntccacccgg	atagccgggg	gtctggcag	actcggggc	60
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agcgtgagc	gcctgggagc	cgcacccgc	ngctgggga	gcacacccgc	ggcgccttc	180
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tcgagc						246

<210> 307

<211> 333

<212> DNA

<213> Homo sapien

<220>

<221> misc_feature

<222> (1) ... (333)

<223> n = A, T, C or G

<400> 307

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tcctctctga	tcctcagc	tcctcagc	ccc			333

<210> 308

<211> 310

<212> DNA

<213> Homo sapien

<400> 308

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acagcagc	aacactggt	ttctgagc	agggcctga	ngcagcagc	agaacactc	240
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<210> 309
 <211> 429
 <212> DNA
 <213> Homo sapien

<400> 309
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<210> 310
 <211> 430
 <212> DNA
 <213> Homo sapien

<220>
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 <222> (1)... (430)
 <223> n = A,T,C or G

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 <212> DNA
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<210> 312

<211> 914

<212> PRT

<213> Homo sapien

<400> 312

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Asn Leu Val Pro Arg Leu Pro Ala Leu Ser Trp Cys Tyr Ser Leu Ser
35 40 45
Thr Ser Pro Ser Pro Thr Cys Gly Met Arg Arg Thr Cys Ser Thr Leu
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Ala Pro Gly Ser Ser Thr Pro Arg Arg Gly Ser Phe Arg Ala Trp Ser
65 70 75 80
Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu
85 90 95

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 Ile Cys Thr His His Pro Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu
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 Gly Pro Tyr Ala Leu Asp Asn Asp Ser Leu Phe Val Asn Gly Phe Thr
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 His Arg Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Pro Thr Val
 165 170 175
 Tyr Leu Gly Ala Ser Lys Thr Pro Ala Ser Ile Phe Gly Pro Ser Ala
 180 185 190
 Ala Ser His Leu Leu Ile Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn
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 210 215 220
 Thr Gln Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr
 225 230 235 240
 Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro
 245 250 255
 Glu Lys Asp Gly Glu Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg
 260 265 270
 Pro Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Gln Leu Tyr Leu Glu
 275 280 285
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 Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val
 305 310 315 320
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 325 330 335
 Phe Thr Ile Asn Asn Leu Arg Tyr Met Ala Asp Met Gly Gln Pro Gly
 340 345 350
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 355 360 365
 Pro Leu Phe Gln Arg Ser Ser Leu Gly Ala Arg Tyr Thr Gly Cys Arg
 370 375 380
 Val Ile Ala Leu Arg Ser Val Lys Asn Gly Ala Glu Thr Arg Val Asp
 385 390 395 400
 Leu Leu Cys Thr Tyr Leu Gln Pro Leu Ser Gly Pro Gly Leu Pro Ile
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 Lys Gln Val Phe His Glu Leu Ser Gln Gln Thr His Gly Ile Thr Arg
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 450 455 460
 Thr Phe Leu Pro Pro Leu Ser Glu Ala Thr Thr Ala Met Gly Tyr His
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 485 490 495
 Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser Thr Glu Gly Val
 500 505 510
 Leu Gln His Leu Leu Arg Pro Leu Phe Gln Lys Ser Ser Met Gly Pro
 515 520 525
 Phe Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg Pro Glu Lys Asp Gly

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545	550	555
Gly Pro Gly Leu Asp Ile Glu Gln Leu Tyr Trp Glu Leu Ser Cln Leu		
	565	570
Thr His Gly Val Thr Gln Leu Gly Phe Tyr Val Leu Asp Arg Asp Ser		
	580	585
Leu Phe Ile Asn Gly Tyr Ala Pro Cln Asn Leu Ser Ile Arg Gly Glu		
	595	600
Tyr Gln Ile Asn Phe His Ile Val Asn Trp Asn Leu Ser Asn Pro Asp		
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Pro Thr Ser Ser Glu Tyr Ile Thr Leu Leu Arg Asp Ile Gln Asp Lys		
625	630	635
Val Thr Thr Leu Tyr Lys Gly Ser Gln Leu His Asp Thr Phe Arg Phe		
	645	650
Cys Leu Val Thr Asn Leu Thr Met Asp Ser Val Leu Val Thr Val Lys		
	660	665
Ala Leu Phe Ser Ser Asn Leu Asp Pro Ser Leu Val Glu Gln Val Phe		
	675	680
Leu Asp Lys Thr Leu Asn Ala Ser Phe His Trp Leu Gly Ser Thr Tyr		
	690	695
Gln Leu Val Asp Ile His Val Thr Cln Met Glu Ser Ser Val Tyr Gln		
705	710	715
Pro Thr Ser Ser Ser Thr Gln His Phe Tyr Leu Asn Phe Thr Ile		
	725	730
Thr Asn Leu Pro Tyr Ser Gln Asp Lys Ala Cln Pro Gly Thr Thr Asn		
	740	745
Tyr Gln Arg Asn Lys Arg Asn Ile Glu Asp Ala Leu Asn Gln Leu Phe		
	755	760
Arg Asn Ser Ser Ile Lys Ser Tyr Phe Ser Asp Cys Gln Val Ser Thr		
	770	775
Phe Arg Ser Val Pro Asn Arg His His Thr Gly Val Asp Ser Leu Cys		
785	790	795
Asn Phe Ser Pro Leu Ala Arg Arg Val Asp Arg Val Ala Ile Tyr Glu		
	805	810
Glu Phe Leu Arg Met Thr Arg Asn Gly Thr Glu Leu Cln Asn Phe Thr		
	820	825
Leu Asp Arg Ser Ser Val Leu Val Asp Gly Tyr Phe Pro Asn Arg Asn		
	835	840
Glu Pro Leu Thr Gly Asn Ser Asp Leu Pro Phe Trp Ala Val Ile Leu		
	850	855
Ile Gly Leu Ala Gly Leu Leu Gly Leu Ile Thr Cys Leu Ile Cys Gly		
865	870	875
Val Leu Val Thr Thr Arg Arg Arg Lys Lys Glu Gly Glu Tyr Asn Val		
	885	890
Gln Gln Gln Cys Pro Gly Tyr Tyr Gln Ser His Leu Asp Leu Glu Asp		
	900	905
Leu Gln		910

<210> 313

<211> G56

<212> DNA

<213> Homo sapiens

<400> 313

```

acagccagtc  gagactgcaa gtgtttctgg tggatcgccg alctgcactc aaaaatgctct 60
ttgtaaagga aagccacaac atgtccang gacctgaggg naottggagg ctgagcaaaag 120
tgcagtttgt ctacgactcc tgggagaa aaacattcac agacgcaglc artgctggga 180
agcacacagc caattcgaa cccctctctg ccttgcctac ccccgctyng nagtctatg 240
agtgttaagc tcaacaaacc atttcaotgg cctctagtga tccgcagang acggtcacca 300
tgcctctgtc tgggttccac atccaaactt ttgacattat ctcaatattt gtcttcagt 360
aagagcataa atgcccagtg gatgagcggg acaaacctgg agaaaccttg cctctgattt 420
tggggctcct attgagcctc gtcatcatgg taacactcgc gatttaccac gtccaccaca 480
aatgactgc caaccaggtg cagatccctc gggacagatc ccagctatag cacatgggcl 540
agaggccgtt aggcaggcac cccctatttc tgctcccca actggatcag gtagnaagac 600
aaaagcactt tcccatcttg taccagagat acaccacat agctacaatc aaacng 656

```

<210> 314

<211> 519

<212> DNA

<213> Homo sapiens

<400> 314

```

tgrgcytggg ccagtcagct tccgggtglg actggagcag ggcttgclyt cttcttcaga 60
gtcccttgc aggggttngt quagctgctc ccactcatgl acanctcca gtccactgat 120
gtttaaggat ggtctgggtg gttaggccca ctgagabaaa ctgagtcasa taactclaca 180
cagttatggt caactgggct ctctgacacn qnggaggaag tggcgggclt tgggtgttgc 240
aaacttcaat qtttatngg qnatgttcaac agagcaagcl ttgttateta gctagictag 300
cattcattag ctatgtgtgt cctttggtat ttatlaaat caccacagca tagggggact 360
ttatgtttag gttttgtcta agagttaget tatctgcttc ttgtgctaac agggccattg 420
ctaccagggg ctttgagcat gggggccagc qtttgaaac ctcaatagt ttttttgaga 480
gataaggaac bngccttnga cctngggcgc gaccacgel 519

```

<210> 315

<211> 441

<212> DNA

<213> Homo sapiens

<400> 315

```

cacagagcgt ttatlgaaa ccttactcct gnaattggg alllcttatt aggttccct 60
aaaagllcnc algttgatn cctgtacata gtacacata tcaantgaag gcagttcct 120
caggggcann cagggtttat agtgcaggt aaalykctc tottttgtgc taclgancnc 180
ttgtcaaacg tctctgcact gtttccagcc lctccagctt gcctclgtcc tgcctctag 240
ttccttcttt gtgacaaacc aaaaagata gaggatttag aacaggaactg cttttccct 300
atgatllaaa atttccatg acttgcgcc ttgggagaaa ttccaagga aatctctctc 360
actcgtctc tccgttttcc tttgtgagct tctgngggag ggttaglygt naatttttga 420
taagaaassa tgcattttgt g 441

```

<210> 316

<211> 247

<212> DNA

<213> Homo sapiens

<400> 316

```

tggcgcggt getggatttc accttcclgc ccttgcgggt gaggccttg ggtctaaagg 60
ggcgggatac tccattatgg cccclngccc tctagggctg ynatagttag aaaagycac 120
ccagttctgc ttggtlaagaa gagagacatg ccccaaccl cggcgccclt lllccclccg 180
atctgclgcl cttactlccg ngcctgcagg agcttcccl ncaagaaacc agcctlgayc 240
ngctnac 247

```


<210> 317
 <211> 409
 <212> DNA
 <213> Homo sapiens

<400> 317
 tgacaggggt cctggagttg ttaagtcacn nantagctgc agggatgga cactgcacac 60
 cacgatgtgg gatgaacagc agccttgggt tgtagccag ngtgtccatg gatttgaccc 120
 gaatgtccc tggaggnccl gtygagagga caggcacttg atggccaga cctctggct 180
 ggaggagtgg tggagccagg acggggcctt caggccatgag ggctagcata acctgacctc 240
 ttgcattcta acactgggtc attaatgaca cctttccagt ggtgtttgca aaaacccaca 300
 ctgtcagggc nctggccttg ggaagagctca ggtgagctca ccaggagagg ttaggccaag 360
 ccasagggta ggtkaacccc aacaccaggg gaacccagcc cccaaacca 409

<210> 318
 <211> 320
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)... (320)
 <223> n = A, T, C or G

<400> 318
 caaggagatg cttaagnggg gtentatgta agtglactcc tggctccagg gtterctggag 60
 cttccagagg ttaggggacn ccttgtagaa cccnaccagc agcatcatct cgtgaaggat 120
 gtcatctgtc aqqaagctgt cctggaagta ggccatctcc acclccatqy ggaatgccata 180
 gtcaatgggc ctttgcctgg gagggggcat caccagagaa nccagagatct tggactcggg 240
 gactgggttg ccagaatagt aaggggagca naggagggct aggcagggtt ggaagccatt 300
 gctggagccc tgcagccgca 320

<210> 319
 <211> 212
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)... (212)
 <223> n = A, T, C or G

<400> 319
 tgaagcaata ggggtcccat tttacagggc gagcatggaa gcccagagag tgggtggggg 60
 aggggggtcct tccctggctc aggcagatgg gaagatgagc aagccgctga agacgtctc 120
 ggctcagag ccttggtaaa tgtgacctt tttggggtct ttttaaccc aaactcggc 180
 acctgtctgc agactcggc cgcgaccatg ct 212

<210> 320
 <211> 769
 <212> DNA
 <213> Homo sapiens

<400> 320

```

tggaggtgta gcagtgaag gagatgtac gcaagagtg tccagcagag cctaaaccc 60
tccaaactac cagtgaagga tgaactgac cagtaclaa ccttcatttc ctgggcccac 120
tggaggaggt cttctctccat cagcgcatac tgaagagggt tactcagalc cttcttgaa 100
cctacaagga agagagagac actggaaggg tcaattctct tcagggtatc ggccagccac 240
tgctgccat gggaggtgga aagtaaggg tgaatgagtc tgcagggccc ctcctatga 300
cattcaaggg cccaattacc cctctctctg tctacalgc attctcttc ttcctgaac 360
ccctctgtt ctgaacctc tctcccgga gctcccaat atattgcagg atgctcatt 420
acttggtatg ttccagagat gccacatcat tcaagttaga gacaalgat atgcttga 480
agagtggcag aaacagcccc aggttgaag ggaagacact atgtctcatt tcccaatcc 540
ttccagctcc atatgagaa gccatgtgca ctctgggacc caactacccc attcaccac 600
gccccttacc ttgagctcct ctatagtagg tlgatgcaat gcatttgaac ctctctgac 660
cagcgttatc ccaactggaa ggaagggaa gtgaagcaca ggtatgtatc ttgggggtc 720
tgggtgctgg ggaagaggga tngctggaag ggggtgagaa gcaatcaca 768

```

<210> 321

<211> 690

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> {1}... (690)

<223> n = A, T, C or G

<400> 321

```

tgggtgctgg ggggcacctg tctctgacg gccagacagc gctcgaagcc tttgtcctg 60
cctactcccc cggaggcaac tgggaggtca acggyaagac atcactcccc tataagaag 120
glgncggggy ttctctctgc acagccagtg tclaaaggtg cttcaagcc cgggacacac 180
cagggggggt ctgtgagggc cccagggalc cttgtgcct gagctgacg accctatga 240
gtctcaacat cagcactgac caatgccact gtccccctgg ctacccgggc agataccgc 300
aagtgaagtg cagcctgcag tgtgtgcag gccgylkccg ggaggaggag tctcctgcy 360
tctgtgacat cggctacggg ggagccaggt glgucaccaa ggtgcatttt cctcttaca 420
cctgtgaact gaggatggac ggagacagct tcatggtgtc ttcagagya qccactatt 480
acagaagcca ggtatgaatg tcaagaggaat ggggggglg tngccagat ccagagccag 540
aaagtgcagg acatctctgc cttctatctg ggcggcclq ngccaccaa cgaggtgact 600
gacagtgaat ttgagaccag gaacttctgg aluqgnetca cctacaagac agccaaaggac 660
tcttccgcl gggccacagc ggaagccacg

```

<210> 322

<211> 104

<212> DNA

<213> Homo sapiens

<400> 322

```

gtcgaagcc agagcaccac cctgtgact ttcccgaacl acaggacatt ctctctccc 60
acgtccacat caggacatc atgagagagg accacacatt ggtc 104

```

<210> 323

<211> 118

<212> DNA

<213> Homo sapiens

<400> 323

```

gggcctctgg cgttccaaa tgacccagg ggtgtctgc gacgantgc ctaatglaa 60
actagtgaat gaggacgaa cactggaat aqaatatag cctggggtga gagacgg 118

```

<210> 324
 <211> 354
 <212> DNA
 <213> Homo sapiens

<400> 324
 tgcctcctcgg gagcttgaag aagaaactgg ctacaaaggg gacattgncg atgtttctcc 60
 agcgggclggl alggaccacg gcttgcacaa ctgtactata cacttcgtga cagtcaccat 120
 taacggagat gatgcagaaa acgcuaggcc gaagccaaaq ccaggggatg gagagtl.lgl 180
 ggaagtcatt tctttaccga agaattgacct gctgcacaga cttgatgctc lqgtagctga 240
 agaacctctc anagtgagcg ccagggctct lccctacgct ctagecgtga accatgcaaa 300
 tgcaaagcca ttggaagtgc ccttcttga attttaagcc caatatgac actg 354

<210> 325
 <211> 642
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc feature
 <222> (1)... (642)
 <223> n = A, T, C or G

<400> 325
 ncatgctga atgggtctct ggtgagagat tgcctcctgg tggtagaaca atcglg.lglg 60
 cccactgata ccaagaccaa tgaagagagc acagcttaagc agccttccct ctccatttcc 120
 ggcacttcaa taagglagctg attggtcctt gcaccagcag tggtagtcgt acctatttca 180
 gtagaggtctc anattcaggl lcttagtllg ccaaggacag gccctacctt atattttttt 240
 ccattctcat catccacttc tcttccctgt ttgtgtctta caataactla atgatggatt 300
 gagttatctg ggtggtctct agccatctgg gcagtgtggg lchgrctaac caaaqggl 360
 tggccctaaa cctgcattt ggcttagggg ctaacagagg tccacagatn atctccacac 420
 acatgttaact gctggagalc ttattctatt atgactaagg aacgagaagt tttccaaaq 480
 tgttagtcag gatctgaagc clgtcallea qataacccag cttttccttz tggcttttag 540
 cccattcaga ctttgcagag gtcnagccaa ggattgcttt lllgntacag lcttctgcca 600
 aatggcttag tctctyagta cctggaaacc agagagagag ag 642

<210> 326
 <211> 455
 <212> DNA
 <213> Homo sapiens

<400> 326
 lccgtqngga tgaacttoga qttcttcccc aggcactgca ggggcacagc caagltcaalc 60
 acctccacct tctcgtctct cctgtctctt tcaattgacaa acttcccgta ccaggcattg 120
 acgatgatga ggccattctt ggaactctct gcctcaallc tcttccggac agattcctgc 180
 atcagccggc cagcggactc cgcctcttgc ttclctctga gcacatcggg ggcggcgctt 240
 lccctctgct tctccaatlc ctctctcttc ttagccctga ggtatggctt gatgacaga 300
 cggtgactgg caaagttagc caclagaggg cccacggctg calagagcat ggcctctggg 360
 agaagctggg ccgtcaagtq actagggagc agtatgtct gactgagcct gtttagcttg 420
 accttgagag aacgcctctg tggactctca acgct 455

<210> 327
 <211> 321
 <212> DNA

<213> Homo sapiens

<400> 327

```

ttcactgtga aotogcagtc ctogatgaac tgcacagat gtgacagccc tctctccttg 60
ctctctgagt tctcttcaat gatgctgatg atgcagctca cgatagcgcg cltctactca 120
nagcncnccct cttcccgag catggtgaa: aggaagtcca taaggacggc rtgtttgoga 180
ggatatttct gacccagggc atgtatggcc tggacaacca cttcccttga ttcatccgag 240
attcttgaca tgaaggagga gatctgcttc atgaggaggt cgtgctgct ctcgclggac 300
gtcttaaggg yggctggtgat g

```

<210> 328

<211> 476

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> {1}...{476}

<223> n = A,T,C or G

<400> 328

```

tgcaggaggg gcatggggg cctggaatgg gctcagccc catggtgtcc ctgataaacc 60
cagtctgcag tctgatgaag tctgggtggg tctggtctac gggctggcag ctactatgat 120
ccaggggga atgcactcct ttcccatct ctcaccacac tctatctctg cttcaggaacc 180
cttcccttca cttcaggaacc aatttcttt caagggccta acccaatgc catccttggg 240
cgggtctaat aagcctccc ccatctctcc cttggtatgc attcccagc tccctggcct 300
tncagggett nctgtctgt ggtctatgt tctctctcc caattgtgg gagctccttg 360
naggcagaga ctctactgac tccatctat cagtggaggt ggtctctcag aggtctgccc 420
attagtatgt atgactgtca tctctcccaa cagggcctga ctctggaggg ctctcc 476

```

<210> 329

<211> 340

<212> DNA

<213> Homo sapiens

<400> 329

```

cgaggagagat tttcaggaac ctgatggaga gtcagatgat ggagatcttg tcaagtctag 60
ctaagggtga ccacagccct gtcagagagg ctgctgcagc ctgctggac aaagcagtyg 120
aatatgggct tatccaaacc aaccaagatg gagagtggg yggcttggcc tgggcccagg 180
gtctcttacc agctcactca ttgtggcagc gagagtcagg atcgagcag ctttggctgg 240
tggtggctgg catgcccaat cctctctgca atcctcgtt gctgcctag gatgctct 300
gtcttgagtc agcggccaag ttcagtcaca cagcctgct

```

<210> 330

<211> 277

<212> DNA

<213> Homo sapiens

<400> 330

```

tgtaccacac acattgggtc tttatcccca gaagacatcg tagatgagga gtcagagcag 60
caggatgcag ccagtgtctg catttgttag gtgcaggagc tctactccat taaggagagg 120
ggccaggcca aagaggttgt tggcaatcca gtgttctct agcaggtacc agacgccaac 180
gatgtgtctt aggcacagga acaccaggtc ctgtgtgtca aatctatnat tgatgatctc 240
ctcttctttt tcccagaacc ctgtgtgaag agtcagac

```

<210> 331
 <211> 136
 <212> DNA
 <213> Homo sapiens

<400> 331
 ttgcttccca cctcctttct ctgtccctc ctgaggttct gcttacaat ggggacctg 60
 atacaaacca cacacaaat gaggatgaaa acagataca ggtaaaatga cctcactgc 120
 ccggcgggcc gctoga 136

<210> 332
 <211> 184
 <212> DNA
 <213> Homo sapiens

<400> 332
 ttgtgagata aaagcagata ctccatgca ttaaaagct tgaatactc atcagggag 60
 ttgctgctct tattgttct taagttaga gttagaaag agacaggag accaagagg 120
 agtctggtc tttgatigaa gctcaagta aggtattoga gtgatttaag ccttttaaa 180
 gcag 184

<210> 333
 <211> 384
 <212> DNA
 <213> Homo sapiens

<400> 333
 cggaaaactt cgagganttg ctccatgca tgggggtgaa ttggaagctt agaaaggttg 60
 ctgtggtctg aggttcaaag cccgcaagtg agatcaaca ggaagagagc actttctaca 120
 tcaaaactc caccacagtg cgcaccacag agalcaactt caaggttggg gaggagtttg 180
 aggagcagac ttgtggttgg aggccttgta agagccttgt gaaatgggag agtgagaata 240
 aatggtcttg tgagcagaag ctctgaagtg gagagggccc caagaccttg tggaccagag 300
 aactgaccaa cagtggggaa ctgctctga ccatgagggc quatgaagtt gtgtgacaa 360
 ggtctatag. ccgagagtgga gcgg 384

<210> 334
 <211> 169
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1) ... (169)
 <223> N = A, T, C or G

<400> 334
 cnacaaacag agcagacacc ttggatcttg tctgtactt ggcacagag gctggacatt 60
 aazattgaat ttcaacttc tgaccgccc cagaagagat ttgtttctc caatataact 120
 agcaagatga acctctctga ggaggttgac ttggaaagct atgtngccc 169

<210> 335
 <211> 185
 <212> DNA
 <213> Homo sapiens

<400> 335

```

ccagggtttgc agcccaggct gcacatcagg ggactgcctc gcaatccttc atgctgttgc 60
tgctgactga tggtyctgkg acggaatgtg aagccacacg tgaagctgtg gtgcgtacct 120
cgacctgac catgtcagtg atcattgttg gtgtgggttg tctgacttt gaggccatgg 180
agcag
185

```

<210> 336

<211> 358

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(358)

<223> n = A,T,C or G

<400> 336

```

ctgcaccttc cttacaggcg ccagaaacac acccaggatg gcattggccc caaaccttgc 60
tttgttttca gtcccatcca actccagcat caggttgtcc agllctcttt gtccacacac 120
agagagacct gagctgatga ggctgtggcg gatggtggag tttatgttgt cactgcctt 180
caggacacct ttgcctaaat aacgttgttt gtctcctacc ctacgtcca ggccctcata 240
gatgcacctc gaggctccac tgggcactgc agctcggaaa agaccttgg cagtatagag 300
atccacctcc actgtgggtt tccctggggg gtccaggatc tcccgggccc agacttcc 358

```

<210> 337

<211> 271

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(271)

<223> n = A,T,C or G

<400> 337

```

caccaagccc caagcnnngg aatcagaat ttactctgtg caactgacti gtaatagcca 60
gaaatcctgc ccagcatggg attcagcacc tggctctgca ccaaatccac cgtcaagctt 120
catacaggat aaaacaaatt caattgcctt ttccacatla ctatcctcan gcttccccau 180
caaaagccaa gtctgcacacg cacaaaaaga gaactctgtg tcaattttct cacttttat 240
aaaagtatgt ttttcacatc caatgaagca n
271

```

<210> 338

<211> 326

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(326)

<223> n = A,T,C or G

<400> 338

```

ctgtgctccc gactngncca tctcaggtac caccgactgc actggggggg gccctctggg 60
gggaagggtl ccacggggga gggatacacc tggaggccag tctcctctct gaggcagccc 120
aactcaggtca aagattttgc ccaactggkc ggttccagag ttccacaga agagaggctt 180

```

```

tcgacgaacc atctctgcaa agatacagcc aacctccac atgtccacag atgttgcata 240
lgtggactgc nqaagaactt cgggagctcg gtaccagatg gtaaccaaca cgggtgcaag 300
tgccatctgg tagctgtaga tttctgg 326

```

<210> 339

<211> 260

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(260)

<223> n = A,T,C or G

<400> 339

```

ttcaactgag gactcatttc gtaccccttg ttgacttcaa gcaaaagacct tcanggtctn 60
caaggacgnc acatttccac ttgogaatgn nclcanggct calcttgaag aanaagnanc 120
ccaagtgtct gatcccagac tggggggtaa ccttgtgggt aaagagtcac ccagttlctg 180
ctlttgggag ttcccttact cgggggggact ggaagcctcg ttggatcggy ccltgcctga 240
cctgggcgcg gaccacgcta 260

```

<210> 340

<211> 220

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(220)

<223> n = A,T,C or G

<400> 340

```

ctggaagccc ggtctgggct ggcagcggaa ggaagccagc aggttcacgc atcnggtgctg 60
gcagtagcgg tggggggcct cgtctatctc cccacactcg ggcacgatct tgggtaacc 120
atcagggcag gtgcactgat aggaagcagg caagttatcg cagtcctgac tggggcgaca 180
gtcgtgcagg gcttgggcac actcgtccac atccacacag 220

```

<210> 341

<211> 384

<212> DNA

<213> Homo sapiens

<400> 341

```

ctgctaccag gggagtcaga gtgacatctc ccagcctcgg clautgtatt ctacgccatg 60
gatggagctt cccacgattt tctctctgcn cagcggcgaa ggtcctctac tgcacaccg 120
ggcgtcaca atggcccgtc tctctcagga actcctcaga gtgagggagg aggggggccc 180
tttccacagg tcaaggccac agggaggaag attgcacgng caotgttctg aggggggagc 240
cccgttggct tacagaagtc atggtgttca tcttcgatgt gggtagcctt ccttaattgt 300
ggcaattata tcacattgag acagaaatc aaaaaggag ccagacccc tggggcagtg 360
aagtgcaccl ggttaccnag acag 384

```

<210> 342

<211> 245

<212> DNA

<213> Homo sapiens

<400> 342

```

ctggctaaac tcatcattgt tactggtggg caccatgccc ttgaagcttc aggcgaagcaa 60
tgtaaccaac aagaatgacc ccaagctccat caactctoga gtcttcattg gaacacacaa 120
cacagctctg gtgaagaaat cagatgtgga gaccatcttc tetaagtatg gccgtgtggc 180
cgggtgtttt gtgcacaagg gctatgacct tgttcaglac tccaatgagc gccatgcccg 240
ggcag                                     245

```

<210> 343

<211> 611

<212> DNA

<213> Homo sapiens

<400> 343

```

ccaaaaaat ccagntttaa tttttttatt tggactgaaa aactaatcat aactgtttaa 60
tctcagccat ctttgaagct tgaagaagaa gtcttttggt ttttgtaaac gtlagccagc 120
tttctgcca gtgtcagaaa atccclattt tgaatccctt cgggtattct tggttcttga 180
aaaaatatac aattatgccc atacatgagt tatttcttgg ttgaaaaat aannagaatc 240
tgcataccac taattccaaa atacaagctc tggaaaaaat atttttcttc attttaaac 300
tttttttaac taataatggc ttgaaagaa naggottaat tlgggggttg taactaaac 360
caaaagaaat gattgacttg agggctcttc ttgtgtaaga ataatcatt agcttaaa 420
agcaggaaga gtttaatttt ntttatgtag ctctcgttca tattaagtgt ttttctctg 480
ttttacctca atttgaacag ataagtttgc ctgcatgccc gacatgccc 540
atagcccgta atagatcttg ggaacalggg tottagagtc ctltgggata agttottata 600
taaalacccc c                                     611

```

<210> 344

<211> 311

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> {1}...{311}

<223> n = A,T,C or G

<400> 344

```

notcgaazaa gcccaagaca gcagaaagag acacctccag cnaactagca aagaaaagca 60
aagaaylall cagaaagag atgtcccagt tcatcgtcca gtgactgaac ccllaccagg 120
aacctgactg caaagtggga agaattacca caactgaga ctttaaaat ctggctcgca 180
agctgactca cgggtttatg aataaggaga tgaagtactg laayaatccg gaggaactgg 240
agtgcattga gaatgtgaaa caccacaccc aggantacac tannaagtae atgcannaan 300
tttgggactl g                                     311

```

<210> 345

<211> 201

<212> DNA

<213> Homo sapiens

<400> 345

```

ccacaggcca tcccgactgc caacctgggg gcccaaggccc tgtgnaagga gccgggcagc 60
actgtcaccg tgagtgtgga tctgagtggt gtgcccattg tcagggaact tctcaggtac 120
ttctactccc gaaggattga calaaccttg tctcagtcga agtqcttcca caagctggcc 180
tctgactatg gggcaggcca g                                     201

```


<210> 346

<211> 370

<212> DNA

<213> Homo sapiens

<400> 346

```

ctgctccagg ggggtgggtg ccttcgtggc ccttgcctcc tccgaggagc caggctgtgt 60
tctcttcaga atgtttctga gcagcaattt gaggcgggtg atgcgttqga agggcagaa 120
cagcagagac ttgaggggaa ggcgtggca gacggggctc ctctccagct tcctcagac 180
ctcccgaaa ttgctgttgc tattcatcag gccctgggag gtgcgttctt gataggctct 240
gttgggtgac taaggcaggt agacccggcg gaagtctggg gcgtggctcc ggactacgt 300
acataacttg cagcagagaa tcttcttctc aaagtctctc tccaggtctg aaaggaact 360
ggcgtgacg
370

```

<210> 347

<211> 416

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(416)

<223> n = A, T, C or G

<400> 347

```

ctgttgtgtc ttgtctggac gttggcttla ccatgagtaa ctccattcct ggtatagaa 60
cccatttga acacgcaag caggtgatca ccatgtttgt acagcgacac ttgtttgtc 120
agacaaagga tgagattgct ttagtctgt ttgttaca ttgactgac aatcccttt 180
ctggtgggga tcaatctacg acatccacag tgcacagaa totgatgta ccagattttg 240
atttgcctga ggacattgna agcacaactc aaccaggttc tcaacaggct gacttcttg 300
atgcactaat cgtgagcatg gatgtgattc aacatgaaac atcaggaag aggtttggg 360
aagagagctc ttgcaatatt cactgacctc aagcagcccg attcagcaaa agtcan 416

```

<210> 348

<211> 351

<212> DNA

<213> Homo sapiens

<400> 348

```

gtacaggaga ggttggcagg tgcagggcag gcaactgagc ctgcaggtga aagggctcgg 60
cagttggatg ctctcttga ggtcttga ttgaaacggg cagggaaatg tctggcagac 120
tctacagcag aagaaacggc aggcagtgc cagggaagag caggagacag atgccttct 180
cttgtctcaa ctgcacagag gcgttcttc ctcttctact aatctctctc agcacagacc 240
cttctacggg gtcaggttgg gggacagtga ggtctttccc tcccaacaag gccatctct 300
aggtctctct agtgggggga acccttggga aatcccggtg cttctcttgg c 351

```

<210> 349

<211> 207

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(207)

<223> n = A, T, C or G

<400> 349

```

nccgggacat ctccaccctc aacagtggca aqaagagcct uggagactgaa caccaggcct 60
tqaccagtga gatttgcactg ctgcagctca ggctgaagac agagggcct gatctgtgcg 120
acagagtgcg cgaatgcag aagctggatg caccagtcaa ggaagtgtg ctgaagtcgg 180
cgggtggaggc tgagcgcctg gtggctg

```

207

<210> 350

<211> 323

<212> DNA

<213> Homo sapiens

<400> 350

```

ccatacaggg ctgttgcctc ggcctcagc gtcattcttc gtacctgat ccagacctgt 60
ggggccagca ccaccgtct acttacctcc ctccgggcca agcacaccn ggagacctgt 120
gagacctggg gtgtaaatgg tgagacgggt accttgggtg acatgacgga actgggcata 180
tgggagccat tggctgtgaa gctgcagact tataagacag cagtggagac ggcagttctg 240
ctactgcgaa ttgatgacat cgttctcagg caccgaaagc aaggcgatga ccagagccgg 300
caagggcggg ctactgatgc tgg

```

323

<210> 351

<211> 353

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)... (353)

<223> n = A,T,C or G

<400> 351

```

cgcgcacac cttggtacct tccantccct tttctttt cngggaaagt gtatggggtt 60
tgtttttgtt ttgtagggtt ttttccctc tccaccttc cctgtctctt ttgtccactg 120
ttgtccttct ctgtggggtt aggtttatg ttttaaatc ctgaggttcc gtctatttcc 180
tcggactcgt cctgcttggg ggggtttctc caccggttaa tctgttgcgt cctttttttc 240
ttttgtcgg aatctgagcc ttttccctc agcttcttcc ttttgaactt tctcttccgg 300
ttctgaacc atacttttac ctgagtttcc gtgagctga ggtgtgtgtg cca 353

```

<210> 352

<211> 467

<212> DNA

<213> Homo sapiens

<400> 352

```

ctgccacac tgatcacttg cgaagtgtcc ttagggttcca agaacaggaa ttgaagctc 60
aatttgagca gaacctgtct gagaaactct ctgaaacaga attacactt cgtcgtctca 120
gtcagagaca agttgscac tttactctgg atataatcc tgcclatgcc agnctcagag 180
gaatcgaacc ggtctgtlcc agccatgcag ttgctgaaga ggaagccaga aaagccacc 240
aactctggtt ttcaagtggg gcatctaaat acagcatgaa gacctcatct gcagaaacac 300
ctactatccc gctgggtagt gcaattgagg ccatacaagg caactgttct gataatgagt 360
tcacccaagg tttaacggca gctatccctc cagagttccct gacccgtggg gcttaccagt 420
aagsgacccct tggagccctt ttctatgctg ttcanaaact ggcctaga

```

467

<210> 353

<211> 350

<212> DNA

<213> Homo sapiens

<400> 353

```

ctgctgcagc cacagtagtt cctcccatgg tgggtggccc tcttggteet gctggcccag 60
gaaatctgtc cccaccagga acagcccctg gaaaacggcc ccttctctta ccaccttqbt 120
gaaatgctgc acgggaactg ccttctggag gaccagtttt accttcccca gacal.ttgte 180
ctgatttgtt agttttcttg gctgcattt caaaktgact caggaactgt k.tattgcatg 240
gagttacaa: aggtttctga ccatgaagtt ctcttttagg taacagah:c attaaccttt 300
ttgaagatgc ttcagatcca acaccaacaa gggcaaacct ctttgaactgg 350

```

<210> 354

<211> 351

<212> DNA

<213> Homo sapiens

<400> 354

```

atttagatga gatctgaggc atggggagcct ggagacagta k.cagactcc tagatttaag 60
tctttaggtt.t t.tgcl.t.t.c k.ctcnccaa ttctt.t.kt.c caatgtatat tttagactcg 120
>q.cagcttct catcttcctc ttaagtcatt cct.t.tgact gactatggca ggat.k.c.c.c 180
gaatggcagt atagatcaat gtctttttct gtaagtata ggaaaaac:c g.c.c.c.c.c.c 240
aaagagctga caattggag g.c.c.c.c.c.c actgacgala atttcttctt aacaaataat 300
cgttctatat acacggaggc tagtcaacca gatt.t.t.ttt gttgagggcg a 351

```

<210> 355

<211> 300

<212> DNA

<213> Homo sapiens

<400> 355

```

ttttggcgca agttttacag attttattaa cgtcgaagct attggtcttg gaaq.t.g.c.c 60
atgcaaatgt t.gatg.c.c.c.g g.c.c.c.c.c.c cagatacctt a.c.c.c.c.c.c.t t.tcttgggt 120
a.c.c.c.c.c.c.c qanattaagg gtaacatca atgt.c.c.c.c.c gnaaacccga cagaagcagg 180
acccagaaa:c caccacacaa aacatcgagg a.c.c.c.c.c.c.c actactgatt cagggcgcca 240
tcgtgagaat catgaagatg aggaagg.t.c t.c.c.c.c.c.c.c gcagtt.c.c.c.c q.c.c.c.c.c.c.c 300
tcackcag 308

```

<210> 356

<211> 207

<212> DNA

<213> Homo sapiens

<400> 356

```

ctgtcccaag t.c.c.c.c.c.c.c aggc.c.c.c.c.c ctgaagacca ct.c.c.c.c.c.c.c atgttcnct 60
atgaag.c.c.c.c ct.c.c.c.c.c.c.c c.c.c.c.c.c.c.c ctgg.c.c.c.c.c.c.c c.c.c.c.c.c.c.c ttcccacgt 120
cctactttta cgtggagagg aactcctgca at.c.c.c.c.c.c.c ctatggaggc tgc.c.c.c.c.c.c.c 180
ataagaacag ctaccgctct gaggagc 207

```

<210> 357

<211> 188

<212> DNA

<213> Homo sapiens

<220>

<221> misc feature

<222> (1)...(188)

<223> n = A,T,C or G

<400> 357

```

tcgaccacgc cctcgtagcg catgngctno aggaacatgc tcagagtgtt gaacaccccg 60
gtggggcccc cgcacagcct gngtgcacg gtgataggcc calcctgtcc aaactgctcc 120
ttggtcttat gcacctgccc gatgaagtea atgaatccct cgcctgtctt gggcaccgcc 180
tgctctgg                                     188

```

<210> 358

<211> 291

<212> DNA

<213> Homo sapiens

<400> 358

```

ctgggagcct aggcacgcta ctgccttcaa atccgatchc ccgagtgcca caattttctgt 60
cccttttaag ggttcacacg actaaagatt tcacalqaaa gggtttgtgct ttttttgagg 120
aggcaggcgg tacgtgacag gggtgcgatg caccggctgt cagagggaaa cagaacaggg 180
caggggaattt cacaatgttc ttctatacaa tngctggaat cctgaataa catcagtttc 240
taagttatgg gtlgalllll aactactggg tttaggcagg gcaggccag g                                     291

```

<210> 359

<211> 117

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)...(117)

<223> n = A,T,C or G

<400> 359

```

gcacccacac tcacagctgg gaaalacagg aagactgltct ccaaaaaaaaa aaaaaaaaaa 60
ccccaaaaaa ctcacaaang taatgaatga taccacagag cctttttcta gaaagag 117

```

<210> 360

<211> 394

<212> DNA

<213> Homo sapiens

<400> 360

```

ctgttctctt ggggttggtc agttttcagc tgggagaaag ggagtcaggc gcattgggaa 60
tcgtggttcc agtctggttg cagaatctgc acatttgcca agaattttcc cclglttgya 120
aagtttgccc cagctttccc gggcacacca ccttttgctc caagtgtctn ccqgtcqvcc 180
aatctgcttg ccacacattg accaagccag acccggttca cccagctoga ggaatccagg 240
ttgaanagtg ggccttgag gcccgggaa gaccaatcaa tggacttctt cccttgagag 300
tcagaggtca ccgtgatgc tgatgcacgc ttatcaktga totgcagtya lltctgcaaa 360
tcaagagaaa ctctgcaggg cactcccttg tttc                                     394

```

<210> 361

<211> 394

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature
 <222> (1)... (394)
 <223> n = A,T,C or G

<400> 361
 ctggggcggat agcacccgggc atattttntt natcgatgag gtctggcccc ctgagcagtc 60
 cagcgaggac ttggtcttag ttgagcawtt tggctaggag gctagtatgc agcacggctc 120
 tgagtctgtg ggatagetgc catuagtaaa cctgaaggag gtgctggctg gtaagggttg 180
 attacaggtt tgggacacgc tegtacaett gccattctct gaatatactg gttagtgagg 240
 tgagcctggc gctcttcttt ggctgagct aaagctacat acaslgcctt tgtggacctc 300
 ggccgcgacc acgctaagcc gaattccgcg aactggcgg ccgttactag tggatccgag 360
 ctcggtaccg aucttggctt aatcatggtc atag 394

<210> 362
 <211> 268
 <212> DNA
 <213> Homo sapiens

<400> 362
 ctgcgcgtgg accagtcagc ttccgggtgt gactggagca ggccctgtcg tcttcttcag 60
 agtcactttg caggggttgg tgaagctgct cccatccatg tacagctccc agtctactcg 120
 tggttcagga tggctctggg ggtttaggca actagaataa actgagtcac akactctac 180
 acagttatgt ctaactgggc tctctgacac cgggaggaggt gtgctgggtt ttaggtgttg 240
 caaacttcaa tggttatgcg gggatgtt 268

<210> 363
 <211> 323
 <212> DNA
 <213> Homo sapiens

<400> 363
 ccttgaacct ttcagcaagt gttgaggtgt aatccgtctc cccagacacg gttcaggactc 60
 gtttgcaccc gttgatgata gaatggggtg ctgatgcacg agtctgggtg ccnatctgca 120
 gacagacact ggcaacattg cggacacctt ccaggagggg agaatgcaga gtttccctctg 180
 tgaatctcag cacttcaggg ttgttagatg tgcctattgt gaacacctgc tggatgacca 240
 gcccaaggga gttgggggag atgttgagca tgttcagcag cgtgggcttcg ctggtctccc 300
 ctttgtctcc agtcttgatc aga 323

<210> 364
 <211> 393
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)... (393)
 <223> n = A,T,C or G

<400> 364
 ccaagctctc catcgtcccc gtgcgcagng gctactgggg gacacagatc ggcaagcccc 60
 aactgtccc ttgcaaggtg acaggccgct ggggtctctt gctggtaacc ctcatcactg 120
 caccagggg cactggcacc gtctccggac ctgtgcctaa gaagctgtct atgctgctg 180
 gcatcgatgg ctgctacacc ttagcccggg gctgcactgc caacctgggc aacttgcgc 240
 aggcacacct tgtgtgcatt tctaagacct acagctacct gaccccccgc ctctggaggg 300
 agactgtatt caccaggtct ccatatcagg agtttaactg ccaactctgt aagacccaca 360

ccagagtcctc cgtgacagcgg actcaggctc cag

393

<210> 365

<211> 371

<212> DNA

<213> Homo sapiens

<400> 365

```

cctctctcaga ggggtagctg ttctttattgc tccggcagcc tccctatagc aagttattgc 60
aggagttcct ctccacgtca aagtaccagg gtgggaagga tgcacggcaa ggcccagtga 120
ctgctgttggc ggtgcagtat tcttctatag tgaacatctc gctggagtggt tcttcagaat 180
cctgccttct gggagcactt gggacagagg aatccctctg attcttctgt gtggacctcg 240
gcccgcacca cgttaagcgg aattccagca cactggcggc cgttctatag ggatccagac 300
tcggtaacca gcttggcgtt aacttggctc tagctgttct ctgtgtgaaa ttgttctccg 360
ctcacaattc c

```

371

<210> 366

<211> 393

<212> DNA

<213> Homo sapiens

<400> 366

```

atttcttgcg agatgggagg tctttgggtg aaactccttt cgggaaaagc tttttggctt 60
cttcttcagg gatggtttgg aggaacatct cactatcccc alctttccaa tcaactgggg 120
tggaaccctt tttttctgct gtcagctgga gagagcttgc taccctgaga atctcatcaa 180
agtctctgce agtggttagct gggtagagga taagccagctt cagcttctca tcaggaccaa 240
aacctaacat caccagagct gctacagggc tgccttttct atcttctctt gctggatcca 300
gcctgcccac caggatggca agctcccgat tcttatccac gatgatggga aaaggtaaat 360
tttctgtggg ctcttcacaa ttgtaagcat tga

```

393

<210> 367

<211> 327

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)... (327)

<223> n = A, T, C or G

<400> 367

```

ccagctctgt ctctctcttg actctaaagt cttnagcagc aagacgggga ttggnagctt 60
gacgaacgat gctggcattg tccacactat ttgcgaagat ctgaacccct aggtcctcga 120
tgatcttgaa gtaatggctc cagtctctga cctggggctc cttcttctcc aagtgtctcc 180
ggattttgct ctccagcttc cgtttctctg tctccaggtt cctcactctg tccaggtaag 240
agggcaggcg gtcgttcagg ctttgcctgg tctccttctc gttctggatg cttccctctc 300
ctgacagacc cctggctctc cgggtagg

```

327

<210> 368

<211> 306

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> {1}...{306}

<223> n = A, T, C or G

<400> 368

```

ctggagaggg aatlcagcag tttnaagaag tactgcccag tcatergtgt cattgcccac 60
ccccagatgc gcoctgottcc totgcccag aagagggccc acctgatgga gatccaggtg 120
aacggaggca ctgtggccga gaagctggac kgggcccgcg agagccttga gcagcaggtg 180
cctgtgaacc aagtgttttg gcaggatgag atgatogacg lcatcggggg gacaaagggc 240
aaaggtacaa aaggggtcac cagkctttg cacacraag agctgccccg caagacccac 300
cgagga                                           306

```

<210> 369

<211> 394

<212> DNA

<213> Homo sapiens

<400> 369

```

tcgagccaca caggacacag gagagctggg ccagcatttg cacttgatag gatttcccgc 60
cggtgcacac gaacgtgcgt lcatlctgtgt totcgggttg gaacgtgat tccacagac 120
ccttgaaata cactgogttg acgaggacca gtctggtagg cncaccatca ataagalcly 180
gggacagcag attgtcaatc atatcccttg tllcattttt aacccatgca tlgatggagt 240
caacggcagc ggttggalcc tnaaaqltca cattooggac ctacacclgg anacatcct 300
tgttccctgt aacaaaaggc acttcaattt cagaggcatt cttaacnaac acggcggttag 360
ccactgtcac aatgccttta ttctcttttg agag                                           394

```

<210> 370

<211> 653

<212> DNA

<213> Homo sapiens

<400> 370

```

ccaccacacc caattcttly ctggtatcat ggagcccgcc acgtgccagc attaccggct 60
acatcatcaa gtatgagaaq actgggkctc ctcccagaga agtggtcccl cygcccngcc 120
ctggtgtcac agaggctact attactggcc tggaaaccggg aaccggatat acattttatg 180
lcatlctgctt gaagaataat cagaagagcg agccclqut tggagggaaa aagacagacg 240
acgttccccc actggtaccc ctccacaccc caattcttca tggaccagag atcttggatg 300
ttccttccac agttccaaag aumcllctg tcacccaccc tgggtalqm actggaaaly 360
gtattcagct tcttggcaat tctgtcagc aaccacagtl kgggcacacn atgatctttg 420
aggaaacalg ttttaggcgg accacacccg ccacacccgc caccocata aggcataggc 480
caagaccata cccgctggal gtaggacaaq aaqctctccc tcagacaacc atctcatggg 540
ccccattcca ggacattctt ggglaacatn tttoatgtca tctyltggg actgaktgag 600
aaccottaca gttcagggtt cctggaactt ctaccagtgc caetctgaca gga                                           653

```

<210> 371

<211> 268

<212> DNA

<213> Homo sapiens

<400> 371

```

ctgccagacc cccattggcg aatttgqnaa ggtgtgcagc aatgcaaca agaccttoga 60
ctcttctctg cacttttttg ccccaaatg caccclggag ggcaccaaga agggccacaa 120
gacttccctg gactacatcg ggccttgcaa atactcccc ccttgccctg actctgagct 180
gacccaattc cccctggcga tgggggactg uctcaagaaac gtccctggta ccttktatga 240
gagggatgag gacaacaacc ttctgact

```

<210> 372
 <211> 392
 <212> DNA
 <213> Homo sapiens

<400> 372
 gctggtgccc ctggtgaacg tggacclcct ggattggcag gggcccagc acctagaggt 60
 ggaactggtc cccctggtec cyxaggagga aagggtgctg ctggtcclec tgggccaccl 120
 ggtgctgctg gkackctctg tctgcaagga atgctctggag aagaggaggt tcttggaggt 180
 cctgggtccaa aggggtgacaa ggggtgaacca ggcgggtccag gtgctgatgg tglcccaggg 240
 aaagatggcc caagggggtcc tactggtcct attggtcttc ctggcccagc tggccagcct 300
 ggagataagg gkgaagggtg tccccccgga ctccaggta tagctggacc tctgtgttagc 360
 cctggtgaga gagggtgaac ctgggcccgc ac 392

<210> 373
 <211> 388
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)... (388)
 <223> n = A,T,C or G

<400> 373
 ccaagcgctc agatcggcaa ggggcaccan ttttctatctg cccagtgcac agccctctctct 60
 ccaggtcagc gatgaaggta tcttcagctc ccccccagc atgagctccc atgacgcccc 120
 aacatctggc ctgggcccagc ttgcacgctt gaagagactc ggtcacggag ccaatctggg 180
 tgaatttgag caggaggcag ttgcaggact tctcgtctcc ggccttggcg atctctcttg 240
 ggttggtcac tctgagatca tccccacta ccttgattcc tgcactggcl gkgaactctt 300
 gccaaagctc ccagkcatcc lggkcaagg gatcttcgat agacacact gggtagtctt 360
 lcatgaaagg ctctctcagg tccgcccag 388

<210> 374
 <211> 393
 <212> DNA
 <213> Homo sapiens

<400> 374
 ctgacgacag cglgaacccc tgcctctggg gtgtctatct cttccatgag aaactctaac 60
 aggaaggcga tcatgggggt cccctccccc aagttatccc atccaagggc ggtgttcttg 120
 gcataaaggt agacaagggc gtgggtcccc lggcagggac aaatggcgag acctacacac 180
 aagggttggc tgggtctgcl gagcgcctgt cccagtacaa gaaggcanga gctgactctg 240
 ccagkcgagc kktgtgctg aagattggg aacacacccc ctgagccctc gccatcatgg 300
 acaatgccan tgttctggcc cgttatgcca gtalctgccc gcagaatggc attgtgacaa 360
 tctgtgagcc tgagatcttc cctgatgggg acc 393

<210> 375
 <211> 394
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)... (394)

<223> n - A,T,C or G

<400> 375

```
ccacaaatgg cgtggtccat gtcctacccn tttttctgca gnetccagcc aacagacctc 60
aggaaagagg gcatgaactl ucagactctg cgtttgagat ctccaacaa gcatcagcgt 120
tttcagaggg ttccagagg totgtgcga: tagccctgt ctatcaaan ttattagaga 180
ngatgungca ttagcttgaa gcactacagc aggaatgcac cagggcagct ctccgcgat 240
ttctctcaga ttccacaga gactgtttga atgttttcaa aacaaagtat cacactttan 300
tgtacatggc ccgacacala atgagatgtg agccttgtgc atgtggggga ggaggagag 360
ngatgtactt tttaactcat gtcccccclx aaca 394
```

<210> 376

<211> 392

<212> DNA

<213> Homo sapiens

<220>

<221> misc. feature

<222> {1}...{392}

<223> n - A,T,C or G

<400> 376

```
ctgccagacc cccattggcg agtttgakkn ggtgtgcagu aatgacaaca agacctttrq 60
ctctccclgn cccclnkttk ccacaaagtg cactcttgag gccaccaaga atggccacaa 120
gtccacactg gactaacctg ggccttgcaa atccatccc ccllqccctg acctgtagct 180
gacgaattc cccctgcgca tgcgggactc gctcaagaa: ntccgtgtca cctgtatga 240
gagggaigag gacaaacacc ttcttactga gaagcagaaq ctgcgggtga ayaagatua 300
tgaantgag atgcactgg aggcaggaga ccccccctg gagclgtrng cccgggactt 360
cgagaagaa: tataacatgt acatctccc kq 392
```

<210> 377

<211> 292

<212> DNA

<213> Homo sapiens

<400> 377

```
caatgtttga tgottaaccc ccccaatttc lgtagatgg alggccagtg caagcgtgac 60
ttgaagtgtt gcatgggcac gcttgggaa: toctggtll cccctgtgaa agcttgatc 120
ctgccalatg gagyaaggtc tggatctcct ctctglrtg tccaggtct lllacccclg 180
agacttqct ccaccactga tatctcct tggggaagc cttggccac: agcaggctt 240
caagaagtgc cagtgtatca atgaataal. aacagagcct allclctctt gc 292
```

<210> 378

<211> 395

<212> DNA

<213> Homo sapiens

<400> 378

```
ctgtctgttc agcgaagggt ttctggcala tccaatgata aggttgcaca agactgttcc 60
aataccagca ccagaaccag ccaactctac tgttgacaga cctgcaccaa taattttggc 120
agcaglalca atgtctctg: lgtttgcact ggtctgaaa: tccctttgga ttagctlgaga 180
caccgaattc tgggcctga ttttccaa: alagacctcc aactcttgc cctctagaa: 240
atagccatct gctcggccac actgtcccg ccttgaagc atgcaacaa gaagcttgc 300
ctgtctgga: tgcctctcca ggagactgt ttttttgca ttctlttcc tttctctc 360
ttctctctga attttttaga tctttlltg tttaa 395
```

<210> 379
 <211> 223
 <212> DNA
 <213> Homo sapiens

<400> 379
 ccagatgaaa lqutgcgca atggctgtgg gaaggtgtcc tgtgtcactc ccaatttctg 60
 agctccagcc accaccaggc tgagcagtga ggagagaaag tttctgactg gccctgcata 120
 tggttccagc ccacctgcgc tacccttttt cgggactctg taltccctct tgggttggcc 180
 acagcttctc cctttcccaa ccaataaagc accacttcc agc 223

<210> 380
 <211> 317
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)...(317)
 <223> n = A, T, C or G

<400> 380
 togaccacag tattccaacc ctctctgtgc tngagaagtg atggaggggtg ctgacaacca 60
 gggctgcagga gaacaaagga gacaaatnag gcagaataln tatcggggat atagaccacg 120
 attccgcagg ggcctctctc gccaaagaca gcttagaagag gacggcaatg aagaaagtca 180
 agaaaatcaa ggagatgaga cccaaggctc gtagccacct caactcgggt accgtccgca 240
 ctccaattac cgcgcgagac gcccaagaaa ccttaacca caagatggca aagngacaaa 300
 agcagatgag ttagcccg 317

<210> 381
 <211> 392
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> [1]...[392]
 <223> n = A, T, C or G

<400> 381
 cctgaaggaa gagctggcct acctgaatnn nacccttgag gaggaaatca gtaacqtnag 60
 gggccaagtg ggagggcagg tcagtgagga ggtggattcc gttccgggca ccgatctcgc 120
 caagatccatg agtgacatgc gaagccaata tgaggtcata gccgagcaga accggaagga 180
 tgetgaagcc tggttcacca gccggactga agaattnac cgggaggtcg atggccacac 240
 ggagcagctc cagatgagca ggtccgaggt tactgaacct cggcgcaacc ttccaggtct 300
 tgagattgag ctgcaglnac agacttcggc nccgaccacg ctatgcagaa ttccagcaca 360
 ctggcggccg ttaactatgg alnnnagctc gg 392

<210> 382
 <211> 234
 <212> DNA
 <213> Homo sapiens

<400> 382

```

cttgcgctgc taaatgagcg tggtaaagg tgggtgcctgc tggggctctg tagataccac 60
gggacttcat tcaaatgaag cggkltctca cgaatgcaat acggccccac ccatgccttc 120
ccgcgacttc gttraggkac atgaagagct ccaaggaggt ctggtgggtg gtgcctact 180
tgaacttggg caacttcaca gggacccctt ttctgaactc catctccaga atgt      234

```

<210> 383
 <211> 396
 <212> DNA
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (1)... (396)
 <223> n = A, T, C or G

```

<400> 383
ccttgacatt ttcagcaagt ggggaagggt tttccgtctc caacagacag gccaggacac 60
gtttgnaccc gttgatgata gaattgggga ctgatgcacc agttgggtag ccactctgca 120
gacagacact ggcacacatg cgggaccccc ggatttcant ggtgccccct gaatttttag 180
tgggtgatacc taaagcctgg aaaaaggagc tctctctggg cccgagacac gtgtctctgg 240
ctggcacagt gacttcacat ggggcaatgg taccagcacc ggcagcagac ctgccccggc 300
gcccctctcg aaagcagall ccagacacact ggaggcagat actagtggat ccgagctcgg 360
taccagctt ggcgtaatac tggctcatag tgttttc      396

```

<210> 384
 <211> 396
 <212> DNA
 <213> Homo sapiens

```

<400> 384
gotgaatagg caccagaggg accctgtacac ctccagacac gtctgcaacc tcaggtctag 60
tagcagtga ctcaggagcg ggagcagtc aitraccorg aaattccctc ltaggtactg 120
ccttctcagc agcagcctgc tcttcttttt cactctcttc aggtlchctg taqaantaca 180
gctcaggccl gacttcccat ggggtgllmc gggaatggt ggcacgacg cgcagaact 240
cccgagccac catcaccac atccaccccc ctgagtgaag tccctgtgtg ttgcctggga 300
tggcaatgt caccatagcg agaggagaat ctgtgttaca cagcgcaatg qlaggtlaag 360
taacataaga tgcctccgtg agaggtcgtg gttcag      396

```

<210> 385
 <211> 2943
 <212> DNA
 <213> Homo sapiens

```

<400> 385
cagcaccagg agtggatgc atctgcacac accgcccctg cccacacagg cctgggctgg 60
ccagagagca gctgtatttg gactgagcc agctgaccca cagcatcant gagctgggac 120
cctacaccct ggacagggac agtctctatg tcaatggttt cacacagcag agctctgtgc 180
ccaccactag cattctctgg accccacacg tggacctggg aaactctggg actccagttt 240
ctaacacctg tccctcggcl gctagccctc tctgggtgcl attcactctc aacttcacca 300
tcacccacct ggggtatgag ggtgacatgc agaacctgg ctccaggag gtcacaccca 360
cggagagggc ccttcagggc ctggtccctg ltcagagaca ccagtgttg cctctcttac 420
tctggtgca gactgacttt gctcaggccl gaaaaggatg ggcacgccc tggagttgat 480
gcatctgca cccaccacc tgaccccaaa agccctagcg tggcagaga gcagctgtat 540
tgggagctga gccagctgac ccacaatat actgagctgg gccctatgc cctggacaac 600
gacagcctct ttgtcwatgg ttccactcat cggagctctg tglncaccac cagcaactct 660

```

```

gggacccccca cagtgtatct ggggncatct aagacLncag cctcgaatatt kggcccttca 720
gctgccagccc atctcctgat actatctcacc ctcaacttca ccatcactaa cctgcgggtat 780
gggggagacaa kglggccclgg ctccagggaag tLaaacta cagagaggggt ccttcagggc 840
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aagaacgggtg ctgagacacg ggtggacctc ctctgcactk acctgcagcc cttcagcggc 1380
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gagctgagtc agctgaccca lyyttctacc caaclgggt totatgtct ngacagggat 1920
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nrgccnngc tactaccagt ggtgctttc ccccgagcag ggtccaaag nrtttggctg gggcagaaa 2820
cgggtgctgg ggtgctttc ggtccaaag aaaaaaaa aaaaaaaa 2880
aaaccacatt ggtcagaaa nnnnnnnnn 2940
aaa 2943

```

<210> 386

<211> 2608

<212> DNA

<213> Homo sapiens

<400> 386

```

gttcnagagc accagtgttg gccctctglc ctctggctgc agatgactt tgcctaggcc 60
tgaaaaggat gggacagcca ctggagkqgn tggcatctgc nccccccc ctgaccccaa 120
aagccctagg ctggacnngg agnagctgtc ttgggagctg agccagctga cccacaatal 180
cactgagctg ggcctctatg ccttgacaa ccgacnctc tttgtcaatg gtttcaclca 240
tcnngctct gtgtccacca ccagcactcc tnggaccccc acagtghatc tggngctc 300
tgaactcca gctcagatat ttggcccttc ngtgcccagc catctctga tactattcac 360
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gttcaacct acagagaggg tcttcaagg cctgtcaagg ccltgttca agaacaccag 480
tgtlgnccct ctctactctg gctgcnngct gaccttgcct aggcagagga agatgggga 540

```

```

agccacogga gtggatgcca tetgcaccca cccgactgac ccccaaggcc ctgggctgga 600
cagagagcag ctgatttlyg acctgagcca gctgacccac agctcactg agrtgggccc 660
ctacacacly gacagggaca gtctctatgt cactgggttc accatcgga gctctgtacc 720
caccaccagc accggggttg tcagcgagga gccattcacg ctgaactlcn ccataacaa 780
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agtttcaaca ttcaggtctg tcccaacag gacccacac ggggtggact cctgtgtaa 2160
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tatgggllgg acccaaaaa aaaaaaa 2608

```

<210> 387

<211> 1761

<212> DNA

<213> Homo sapiens

<400> 387

```

ctgaacttca ccatcaacaa nclgaggtac atggcgagca tgggccaac cggctccctc 60
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agcctgggtg cccggtacac aggtgcagg gtcatcgac taaggtctgt gaagaacgt 180
gctgagacaa gggtggacct cctctgcagg lagggtgcag ggggtccac ggcataccc 240
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ccacattctt gctclclclg laggagcca caccagcct ggggtacac ctgaagaccc 360
tcacactcaa ctccacogag ggggtccttc agctatcacc agatctggc aagggtcag 420
ctacatlcac ctccacogag ttgggttgc aactgatctc cagcccttg ttcagagag 480
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tggacatata gcagclltae tgggagctga gtcagctgac cctgggtgt acccaactg 660
gcttctatgt cctggagag gclagctct tcalcaatg ctatgcacc cagaatttat 720
caatccgggt caggtacacg akcatttcc aactgtcna ctggacccct agtaatccag 780

```

```

accccacatc ctcagagtac atcaccctgc tgggggacat ccaggacaag gtcaccacac 840
ctacacaaag cactcaacta calgacacat tccgttctg cctggctaac aacttgacga 900
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ccaccggccg gcmgagang gaaggagaa acaacgtcaa gcaacagtgc ccaggctact 1620
accagtcaca cctagacctg gaggaletgc aatgactnga acttgccagt gctgggggtg 1680
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ggacacacaa aaaaaaaaaa n

```

1761

<210> 388

<211> 772

<212> PRT

<213> Homo sapiens

<400> 388

```

Met Ser Met Val Ser His Ser Gly Ala Leu Cys Pro Pro Leu Ala Phe
      5                                10                        15

```

```

Leu Gly Pro Pro Gln Trp Thr Trp Glu His Leu Gly Leu Gln Phe Leu
      20                                25                        30

```

```

Asn Leu Val Pro Arg Leu Pro Ala Leu Ser Trp Cys Tyr Ser Leu Ser
      35                                40                        45

```

```

Thr Ser Pro Ser Pro Thr Cys Gly Met Arg Arg Thr Cys Ser Thr Leu
      50                                55                        60

```

```

Ala Pro Gly Ser Ser Thr Pro Arg Arg Gly Ser Phe Arg Ala Trp Ser
      65                                70                        75                        80

```

```

Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu
      85                                90                        95

```

```

Thr Leu Leu Arg Pro Glu Lys Asp Gly Thr Ala Thr Gly Val Asp Ala
     100                                105                        110

```

```

Ile Cys Thr His His Pro Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu
     115                                120                        125

```

```

Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu
     130                                135                        140

```

```

Gly Pro Tyr Ala Leu Asp Asn Asp Ser Leu Phe Val Asn Gly Phe Thr
     145                                150                        155                        160

```

```

His Arg Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Pro Thr Val

```

165					170					175					
Tyr	Leu	Gly	Ala	Ser	Lys	Thr	Pro	Ala	Ser	Ile	Phe	Gly	Pro	Ser	Ala
			180					185					190		
Ala	Ser	His	Leu	Leu	Ile	Leu	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn
		195					200					205			
Leu	Arg	Tyr	Glu	Glu	Asn	Met	Trp	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr
	210					215					220				
Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Arg	Pro	Leu	Phe	Lys	Asn	Thr
225						230					235				240
Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro
				245					250					255	
Glu	Lys	Asp	Gly	Glu	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg
			260					265					270		
Pro	Asp	Pro	Thr	Gly	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Leu	Gln
		275					280					285			
Leu	Ser	Gln	Leu	Thr	His	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu
		290				295					300				
Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Val
305						310					315				320
Pro	Thr	Thr	Ser	Thr	Gly	Val	Val	Ser	Gln	Glu	Pro	Phe	Thr	Leu	Asn
				325					330					335	
Phe	Thr	Ile	Asn	Asn	Leu	Arg	Tyr	Met	Ala	Asp	Met	Gly	Gln	Pro	Gly
			340					345					350		
Ser	Leu	Lys	Phe	Asn	Ile	Thr	Asp	Asn	Val	Met	Lys	His	Leu	Leu	Ser
		355					360					365			
Pro	Leu	Phe	Gln	Arg	Ser	Ser	Leu	Gly	Ala	Arg	Tyr	Thr	Gly	Cys	Arg
	370					375					380				
Val	Ile	Ala	Leu	Arg	Ser	Val	Lys	Asn	Gly	Ala	Gln	Thr	Arg	Val	Asp
385						390					395				400
Leu	Leu	Cys	Thr	Tyr	Leu	Gln	Pro	Leu	Ser	Gly	Pro	Gly	Leu	Pro	Ile
			405					410					415		
Lys	Gln	Val	Phe	His	Gln	Leu	Ser	Gln	Gln	Thr	His	Gly	Ile	Thr	Arg
			420				425					430			
Leu	Gly	Pro	Tyr	Ser	Leu	Asp	Lys	Asp	Ser	Leu	Tyr	Leu	Asn	Gly	Tyr
	435						440					445			
Asn	Glu	Pro	Gly	Pro	Asp	Glu	Pro	Pro	Thr	Thr	Pro	Lys	Pro	Ala	Thr
	450					455					460				

Thr Phe Leu Pro Pro Leu Ser Glu Ala Thr Thr Ala Met Gly Tyr His
 465 470 475 480
 Leu Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser Asn Leu Gln Tyr Ser
 485 490 495
 Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser Thr Glu Gly Val
 500 505 510
 Leu Gln His Leu Leu Arg Pro Leu Phe Gln Lys Ser Ser Met Gly Pro
 515 520 525
 Phe Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg Pro Glu Lys Asp Gly
 530 535 540
 Ala Ala Thr Gly Val Asp Thr Thr Cys Thr Tyr His Pro Asp Pro Val
 545 550 555 560
 Gly Pro Gly Leu Asp Ile Gln Gln Leu Tyr Trp Glu Leu Ser Gln Leu
 565 570 575
 Thr His Gly Val Thr Gln Leu Gly Phe Tyr Val Leu Asp Arg Asp Ser
 580 585 590
 Leu Phe Ile Asn Gly Tyr Ala Pro Gln Asn Leu Ser Ile Arg Gly Glu
 595 600 605
 Tyr Gln Ile Asn Phe His Ile Val Asn Trp Asn Leu Ser Asn Pro Asp
 610 615 620
 Pro Thr Ser Ser Glu Tyr Ile Thr Leu Leu Arg Asp Ile Gln Asp Lys
 625 630 635 640
 Val Thr Thr Leu Tyr Lys Gly Ser Gln Leu His Asp Thr Phe Arg Phe
 645 650 655
 Cys Leu Val Thr Asn Leu Thr Met Asp Ser Val Leu Val Thr Val Lys
 660 665 670
 Ala Leu Phe Ser Ser Asn Leu Asp Pro Ser Leu Val Glu Gln Val Phe
 675 680 685
 Leu Asp Lys Thr Leu Asn Ala Ser Phe His Trp Leu Gly Ser Thr Tyr
 690 695 700
 Gln Leu Val Asp Ile His Val Thr Gln Met Glu Ser Ser Val Tyr Gln
 705 710 715 720
 Pro Thr Ser Ser Ser Ser Thr Gln His Phe Tyr Leu Asn Phe Thr Ile
 725 730 735
 Thr Asn Leu Pro Tyr Ser Gln Asp Lys Ala Gln Pro Gly Thr Thr Asn
 740 745 750

Tyr Gln Arg Asn Lys Arg Asn Ile Glu Asp Ala Ala Pro His Arg Gly
 755 760 765

Gly Leu Pro Val
 770

<210> 389

<211> 833

<212> PRT

<213> Homo sapiens

<400> 389

Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr
 5 10 15

Leu Leu Arg Pro Glu Lys Asp Gly Thr Ala Thr Gly Val Asp Ala Ile
 20 25 30

Cys Thr His His Pro Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu Gln
 35 40 45

Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly
 50 55 60

Pro Tyr Ala Leu Asp Asn Asp Ser Leu Phe Val Asn Gly Phe Thr His
 65 70 75 80

Arg Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Pro Thr Val Tyr
 85 90 95

Leu Gly Ala Ser Lys Thr Pro Ala Ser Ile Phe Gly Pro Ser Ala Ala
 100 105 110

Ser His Leu Leu Ile Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu
 115 120 125

Arg Tyr Glu Glu Asn Met Trp Pro Gly Ser Arg Lys Phe Asn Thr Thr
 130 135 140

Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr Ser
 145 150 155 160

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
 165 170 175

Lys Asp Gly Glu Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Pro
 180 185 190

Asp Pro Thr Gly Pro Gly Leu Asp Arg Gln Gln Leu Tyr Leu Glu Leu
 195 200 205

Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
 210 215 220

Arg Asp Ser L u Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro
 225 230 235 240
 Thr Thr Ser Thr Gly Val Val Ser Glu Glu Pro Phe Thr Leu Asn Phe
 245 250 255
 Thr Ile Asn Asn Leu Arg Tyr Met Ala Asp Met Gly Gln Pro Gly Ser
 260 265 270
 Leu Lys Phe Asn Ile Thr Asp Asn Val Met Lys His Leu Leu Ser Pro
 275 280 285
 Leu Phe Gln Arg Ser Ser Leu Gly Ala Arg Tyr Thr Gly Cys Arg Val
 290 295 300
 Ile Ala Leu Arg Ser Val Lys Asn Gly Ala Glu Thr Arg Val Asp Leu
 305 310 315 320
 Leu Cys Thr Tyr Leu Gln Pro Leu Ser Gly Pro Gly Leu Pro Ile Lys
 325 330 335
 Gln Val Phe His Glu Leu Ser Gln Gln Thr His Gly Ile Thr Arg Leu
 340 345 350
 Gly Pro Tyr Ser Leu Asp Lys Asp Ser Leu Tyr Leu Asn Gly Tyr Asn
 355 360 365
 Glu Pro Gly Pro Asp Glu Pro Pro Thr Thr Pro Lys Pro Ala Thr Thr
 370 375 380
 Phe Leu Pro Pro Leu Ser Glu Ala Thr Thr Ala Met Gly Tyr His Leu
 385 390 395 400
 Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser Asn Leu Gln Tyr Ser Pro
 405 410 415
 Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser Thr Glu Gly Val Leu
 420 425 430
 Gln His Leu Leu Arg Pro Leu Phe Gln Lys Ser Ser Met Gly Pro Phe
 435 440 445
 Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg Pro Glu Lys Asp Gly Ala
 450 455 460
 Ala Thr Gly Val Asp Thr Thr Cys Thr Tyr His Pro Asp Pro Val Gly
 465 470 475 480
 Pro Gly Leu Asp Ile Gln Gln Leu Tyr Tyr Glu Leu Ser Gln Leu Thr
 485 490 495
 His Gly Val Thr Gln Leu Gly Phe Tyr Val Leu Asp Arg Asp Ser Leu
 500 505 510
 Phe Ile Asn Gly Tyr Ala Pro Gln Asn Leu Ser Ile Arg Gly Glu Tyr

515					520					525					
Gln	Ile	Asn	Phe	His	Ile	Val	Asn	Trp	Asn	Leu	Ser	Asn	Pro	Asp	Pro
530							535					540			
Thr	Ser	Ser	Glu	Tyr	Ile	Thr	Leu	Leu	Arg	Asp	Ile	Gln	Asp	Lys	Val
545							550					555			560
Thr	Thr	Leu	Tyr	Lys	Gly	Ser	Gln	Leu	His	Asp	Thr	Phe	Arg	Phe	Cys
				565					570					575	
Leu	Val	Thr	Asn	Leu	Thr	Met	Asp	Ser	Val	Leu	Val	Thr	Val	Lys	Ala
			580					585					590		
Leu	Phe	Ser	Ser	Asn	Leu	Asp	Pro	Ser	Leu	Val	Glu	Gln	Val	Phe	Leu
		595					600					605			
Asp	Lys	Thr	Leu	Asn	Ala	Ser	Phe	His	Trp	Leu	Gly	Ser	Thr	Tyr	Gln
	610						615					620			
Leu	Val	Asp	Ile	His	Val	Thr	Glu	Met	Glu	Ser	Ser	Val	Tyr	Gln	Pro
625							630					635			640
Thr	Ser	Ser	Ser	Ser	Thr	Gln	His	Phe	Tyr	Leu	Asn	Phe	Thr	Ile	Thr
				645					650					655	
Asn	Leu	Pro	Tyr	Ser	Gln	Asp	Lys	Ala	Gln	Pro	Gly	Thr	Thr	Asn	Tyr
			660					665						670	
Gln	Arg	Asn	Lys	Arg	Asn	Ile	Glu	Asp	Ala	Leu	Asn	Gln	Leu	Phe	Arg
			675					680				685			
Asn	Ser	Ser	Ile	Lys	Ser	Tyr	Phe	Ser	Asp	Cys	Gln	Val	Ser	Thr	Phe
			690				695					700			
Arg	Ser	Val	Pro	Asn	Arg	His	His	Thr	Gly	Val	Asp	Ser	Leu	Cys	Asn
705							710					715			720
Phe	Ser	Pro	Leu	Ala	Arg	Arg	Val	Asp	Arg	Val	Ala	Ile	Tyr	Gln	Gln
				725					730					735	
Phe	Leu	Arg	Met	Thr	Arg	Asn	Gly	Thr	Gln	Leu	Gln	Asn	Phe	Thr	Leu
			740					745						750	
Asp	Arg	Ser	Ser	Val	Leu	Val	Asp	Gly	Tyr	Phe	Pro	Asn	Arg	Asn	Glu
			755					760					765		
Pro	Leu	Thr	Gly	Asn	Ser	Asp	Leu	Pro	Phe	Trp	Ala	Val	Ile	Leu	Ile
			770				775						780		
Gly	Leu	Ala	Gly	Leu	Leu	Gly	Leu	Ile	Thr	Cys	Leu	Ile	Cys	Gly	Val
785							790					795			800
Leu	Val	Thr	Thr	Arg	Arg	Arg	Lys	Lys	Glu	Gly	Glu	Tyr	Asn	Val	Gln
				805					810					815	

Gln Gln Cys Pro Gly Tyr Tyr Gln Ser His Leu Asp Leu Glu Asp Leu
820 825 830

Gln

<210> 390

<211> 438

<212> PRT

<213> Homo sapiens

<400> 390

Met Gly Tyr His Leu Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser Asn
5 10 15

Leu Gln Tyr Ser Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser
20 25 30

Thr Glu Gly Val Leu Gln His Leu Leu Arg Pro Leu Phe Gln Lys Ser
35 40 45

Ser Met Gly Pro Phe Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg Pro
50 55 60

Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Thr Thr Cys Thr Tyr His
65 70 75 80

Pro Asp Pro Val Gly Pro Gly Leu Asp Ile Gln Gln Leu Tyr Trp Glu
85 90 95

Leu Ser Gln Leu Thr His Gly Val Thr Gln Leu Gly Phe Tyr Val Leu
100 105 110

Asp Arg Asp Ser Leu Phe Ile Asn Gly Tyr Ala Pro Gln Asn Leu Ser
115 120 125

Ile Arg Gly Glu Tyr Gln Ile Asn Phe His Ile Val Asn Trp Asn Leu
130 135 140

Ser Asn Pro Asp Pro Thr Ser Ser Glu Tyr Ile Thr Leu Leu Arg Asp
145 150 155 160

Ile Gln Asp Lys Val Thr Thr Leu Tyr Lys Gly Ser Gln Leu His Asp
165 170 175

Thr Phe Arg Phe Cys Leu Val Thr Asn Leu Thr Met Asp Ser Val Leu
180 185 190

Val Thr Val Lys Ala Leu Phe Ser Ser Asn Leu Asp Pro Ser Leu Val
195 200 205

Glu Gln Val Phe Leu Asp Lys Thr Leu Asn Ala Ser Phe His Trp Leu
210 215 220

Gly Ser Thr Tyr Gln Leu Val Asp Ile His Val Thr Glu Met Glu Ser
 225 230 235 240
 Ser Val Tyr Gln Pro Thr Ser Ser Ser Thr Gln His Phe Tyr Leu
 245 250 255
 Asn Phe Thr Ile Thr Asn Leu Pro Tyr Ser Gln Asp Lys Ala Gln Pro
 260 265 270
 Gly Thr Thr Asn Tyr Gln Arg Asn Lys Arg Asn Ile Glu Asp Ala Leu
 275 280 285
 Asn Gln Leu Phe Arg Asn Ser Ser Ile Lys Ser Tyr Phe Ser Asp Cys
 290 295 300
 Glu Val Ser Thr Phe Arg Ser Val Pro Asn Arg His His Thr Gly Val
 305 310 315 320
 Asp Ser Leu Cys Asn Phe Ser Pro Leu Ala Arg Arg Val Asp Arg Val
 325 330 335
 Ala Ile Tyr Glu Gln Phe Leu Arg Met Thr Arg Asn Gly Thr Gln Leu
 340 345 350
 Gln Asn Phe Thr Leu Asp Arg Ser Ser Val Leu Val Asp Gly Tyr Phe
 355 360 365
 Pro Asn Arg Asn Glu Pro Leu Thr Gly Asn Ser Asp Leu Pro Phe Trp
 370 375 380
 Ala Val Ile Leu Ile Gly Leu Ala Gly Leu Leu Gly Leu Ile Thr Cys
 385 390 395 400
 Leu Ile Cys Gly Val Leu Val Thr Thr Arg Arg Arg Lys Lys Glu Gly
 405 410 415
 Glu Tyr Asn Val Gln Gln Gln Cys Pro Gly Tyr Tyr Gln Ser His Leu
 420 425 430
 Asp Leu Glu Asp Leu Gln
 435

<210> 391

<211> 2627

<212> DNA

<213> Homo sapiens

<400> 391

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 tagcaacalc attattctgg ctggagcaat tgcactcact attggtttg gtaallccag 180
 gagcactcc atcacagta ctactgtcgc cccagctggg aacattggg annatggaat 240
 cctgagctgc acctttgaac ctgacatacc accttctgat atcgtgatac atggctgaa 300
 ggaaggtgtt ttaggtttgg tccatgaatt caaagaagga aaggttggc tgtcggagca 360

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ggatgaaatg ttacagaggcc gncacagcagl gtttgcctgat caagtcgatag ttggcaatgc 420
ctctttgcgg ctgaaaaacg tgcactcacc agatgctggc acctacaaat gtatctatcat 480
cacttctaaa ggcaaggggg atctctaacct kaggtataaa actggagcct tcagcatgcc 540
ggaagtgaat gtggactata atgccagctc agagacottg cagtgtgagg ctccccgati 600
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agtctccaat accagctttt gctgaaactc tgagaatgtg acctgaagg tktgtctgt 720
gctctacaat gktargatca acaacacata ctctgtatg attgaaaatg acattgccaa 780
agcaacaggg gatatacaag tgaanagatc ggaatcaca aggcggagtc acctacagct 840
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taaaatgcac qtggagacaa gtgcacacac agatctcagg gactcccc ccgtgtcac 1260
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gtgtaatgt tctctlgagq aagccccctg aaagtctatc ccaacatctc cacatcttat 1380
attccaaaa ttanctgta gtatgtacac taagacgttg ctaathgact gccactctgc 1440
aackcagggg cgtctgcatt ttagtaatgg gtcaactqat tcaattttta tgaattctc 1500
aanagtgcct tggctctct tccaaactga caaatgccaa aglttagaaa aakgataata 1560
atttagcat aaacagagca ktgggagaca cttattttat aaataaactg agcatctct 1620
tttaaaaca acaatgcgg gtttatttct kagatgatgt tcatcctga atggtccagg 1680
gaayaacct tcaacttgac tatatggcat tatgtctca caagctctga ggttctctc 1740
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cagctggggg gatttcgccc cccatctcct ggggaatgtc tgaagacaat tllggttacc 1860
tcaatgaggg agtggaggag gatacagtrc tactacccc tagtggaiaa aggcacggga 1920
tgtgtctca cctccacaa tntacaggac gtctcccat tacaactacc caatccgaag 1980
tgtcaatgt gtccaggacta agaaacccct gttttagla gnaaagggcc tggaaaggg 2040
ggagccaaca aatctgtctg ctctccacaa ttagtctatt gcaataaagc attctgctc 2100
tttggctgtl gctccagcac agagagccag aatctatctg ygcacaggga taacatctc 2160
cagtgaacag agttgacaag gctatggga aatctatctg ygcacaggga taacatctc 2220
gagctctaaa gtttcttcc ctcatlcta cctgcagac gngattatct tcagcttgt 2280
cctgagttct agctcaggl lclctactct gaatttagat ctccagaccc tctctgcca 2340
caattcaaa ltaggcaaca aacatatacc ttcattgaag cacacacag cttttgaaag 2400
caaggaacat gactgcttga atcgaggcct lgggaatga agctttgag gaaaagaata 2460
ctttgtttcc agccccctc ccacacact catgctttaa ccaatgcctt cctggaccl 2520
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<210> 392

<211> 310

<212> PRT

<213> Homo sapiens

<400> 392

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His Ala Ser Ala His Ala Ser Gly Arg Gln Arg Gln Leu His Ser Ala
          5                      10                      15

```

```

Ser Thr Gln Ile Arg Trp Gln Pro Ser Pro Ala Met Ala Ser Leu Gly
          20                      25                      30

```

```

Gln Ile Leu Phe Trp Ser Ile Ile Ser Ile Ile Ile Ile Leu Ala Gly
          35                      40                      45

```

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Ala Ile Ala Leu Ile Ile Gly Phe Gly Ile Ser Gly Arg His Ser Ile

```

50 55 60
 Thr Val Thr Thr Val Ala Ser Ala Gly Asn Ile Gly Glu Asp Gly Ile
 65 70 75 80
 Leu Ser Cys Thr Phe Glu Pro Asp Ile Lys Leu Ser Asp Ile Val Ile
 85 90 95
 Gln Trp Leu Lys Glu Gly Val Leu Gly Leu Val His Glu Phe Lys Glu
 100 105 110
 Gly Lys Asp Glu Leu Ser Glu Gln Asp Glu Met Phe Arg Gly Arg Thr
 115 120 125
 Ala Val Phe Ala Asp Gln Val Ile Val Gly Asn Ala Ser Leu Arg Leu
 130 135 140
 Lys Asn Val Gln Leu Thr Asp Ala Gly Thr Tyr Lys Cys Tyr Ile Ile
 145 150 155 160
 Thr Ser Lys Gly Lys Gly Asn Ala Asn Leu Glu Tyr Lys Thr Gly Ala
 165 170 175
 Phe Ser Met Pro Glu Val Asn Val Asp Tyr Asn Ala Ser Ser Glu Thr
 180 185 190
 Leu Arg Cys Glu Ala Pro Arg Trp Phe Pro Gln Pro Thr Val Val Trp
 195 200 205
 Ala Ser Gln Val Asp Gln Gly Ala Asn Phe Ser Glu Val Ser Asn Thr
 210 215 220
 Ser Phe Glu Leu Asn Ser Glu Asn Val Thr Met Lys Val Val Ser Val
 225 230 235 240
 Leu Tyr Asn Val Thr Ile Asn Asn Thr Tyr Ser Cys Met Ile Glu Asn
 245 250 255
 Asp Ile Ala Lys Ala Thr Gly Asp Ile Lys Val Thr Glu Ser Glu Ile
 260 265 270
 Lys Arg Arg Ser His Leu Gln Leu Leu Asn Ser Lys Ala Ser Leu Cys
 275 280 285
 Val Ser Ser Phe Phe Ala Ile Ser Trp Ala Leu Leu Pro Leu Ser Pro
 290 295 300
 Tyr Leu Met Leu Lys
 305

<210> 393

<211> 203

<212> PRT

<213> Homo sapiens

<400> 393

Met Ala Ser Leu Gly Gln Ile Leu Pro Trp Ser Ile Ile Ser Ile Ile
 5 10 15

Ile Ile Leu Ala Gly Ala Ile Ala Leu Ile Ile Gly Phe Gly Ile Ser
 20 25 30

Gly Arg His Ser Ile Thr Val Thr Thr Val Ala Ser Ala Gly Asn Ile
 35 40 45

Gly Glu Asp Gly Ile Leu Ser Cys Thr Pro Glu Pro Asp Ile Lys Leu
 50 55 60

Ser Asp Ile Val Ile Gln Trp Leu Lys Glu Gly Val Leu Gly Leu Val
 65 70 75 80

His Glu Phe Lys Glu Gly Lys Asp Glu Leu Ser Glu Gln Asp Glu Met
 85 90 95

Phe Arg Gly Asn Thr Ala Val Phe Ala Asp Gln Val Ile Val Gly Asn
 100 105 110

Ala Ser Leu Arg Leu Lys Asn Val Gln Leu Thr Asp Ala Gly Thr Tyr
 115 120 125

Lys Cys Tyr Ile Ile Thr Ser Lys Gly Lys Gly Asn Ala Asn Leu Glu
 130 135 140

Tyr Lys Thr Gly Ala Phe Ser Met Pro Glu Val Asn Val Asp Tyr Asn
 145 150 155 160

Ala Ser Ser Glu Thr Leu Arg Cys Glu Ala Pro Arg Trp Phe Pro Gln
 165 170 175

Pro Thr Val Val Trp Ala Ser Gln Val Asp Gln Gly Ala Asn Phe Ser
 180 185 190

Glu Val Ser Asn Thr Ser Phe Glu Leu Asn Ser Glu Asn Val Thr Met
 195 200 205

Lys Val Val Ser Val Leu Tyr Asn Val Thr Ile Asn Asn Thr Tyr Ser
 210 215 220

Cys Met Ile Glu Asn Asp Ile Ala Lys Ala Thr Gly Asp Ile Lys Val
 225 230 235 240

Thr Glu Ser Glu Ile Lys Arg Arg Ser His Leu Gln Leu Leu Asn Ser
 245 250 255

Lys Ala Ser Leu Cys Val Ser Ser Phe Phe Ala Ile Ser Trp Ala Leu
 260 265 270

Leu Pro Leu Ser Pro Tyr Leu Met Leu Lys
 275 280

11729.1 contg

TTAGAGAGGCACAGAAGGAAGAGAGCTTAAAGCAGCAAGCCGGGTTTTTTTGGTTTTGT
 TTTGTTTTGTTTTGTTTTGAGATGGAGTCTCACTCTGTTGCCCAAGCTGGAGTACAACGGCA
 TGATCTCAGCTCGCTGCAACCTCCGGCTCCACGTTCAAAGTGATTCTCTGGCTCAGCCTCC
 CAAATAGCTGGGATTACAGGCGCCCGCCACCACGCTCAGCTAAATTTTTTGTATTTTTAGT
 AGAGACAGGCTTTACCAAGGTTGCCAAGGCTGCTTTGAACCTCTGACCTCAGGTGATCCA
 CCGGCTCGGCTCCCAAGGTCTGGGATTACAGGCTGAGCCACCACGCGCGGCCCCCAA
 AGCTTTTTCTTTTGTCTTTAGCGTAAAGCTCTCTGCGCATGCAGTATCTACATAACTGACGT
 GACTGCCAGCAAGCTCAGTCACTCCGTGGTC

11729-45.21.31.cons1

TAGGATGTGTTGGACCTCTGTGTCAAAAACCTCACAAAGAATCCCTGCTCATTACA
 GAAGAAGATGCAATTAATAATAGGGTTATTTCAACTTTTTATCTGAGGACAAGTATECAT
 TAAATATTGTGTCAGAAGAGATTGAATACCTGCTTAAGAAAGCTTACAGAAGCTATGGAG
 GAGGTTGGCAAGCAAGAACAAATTTGAACATTATAAAATCAACTTTGATGACAGTAAAAATG
 GCTTTCTGATGGGAACTTATTGAGCTTATTGGAAATGGACAGTTTAGCAAAAGCCATGGA
 CCGGCAGACTGTGTCTATGGCAATTAATGAAGTCTTTAATGAACCTTATAATGATGTOTTA
 AAGCAGGTTACATGATGAATAAAGCGGCCACAGACCGAAAACCTGCACTGAAAQATGGTT
 TGTACTAAAACCGAACATAATTTCTTACTATGTGAGTCAAGCATCTGAAGGATAAGCAAAAG
 AGACATTCTCTTGCATGAATAATTCCTGTCTAGAGTCTTCCCTGACAAAGATGGA.A

11729-45.21.31.cons2

TTAGAGAGGCACAGAAGGAAGAGAGCTTAAAGCAGCAAGCCGGGTTTTTTTGGTTTTGT
 TTTGTTTTGTTTTGTTTTGAGATGGAGTCTCACTCTGTTGCCCAAGCTGGAGTACAACGGCA
 TGATCTCAGCTCGCTGCAACCTCCGGCTCCACGTTCAAAGTGATTCTCTGGCTCAGCCTCC
 CAAATAGCTGGGATTACAGGCGCCCGCCACCACGCTCAGCTAAATTTTTTGTATTTTTAGT
 AGAGACAGGCTTTACCAAGGTTGCCAAGGCTGCTTTGAACCTCTGACCTCAGGTGATCCA
 CCGGCTCGGCTCCCAAGGTCTGGGATTACAGGCTGAGCCACCACGCGCGGCCCCCAA
 AGCTTTTTCTTTTGTCTTTAGCGTAAAGCTCTCTGCGCATGCAGTATCTACATAACTGACGT
 GACTGCCAGCAAGCTCAGTCACTCCGTGGTC

11731.1contg

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 AGAGCTTAGATGCAAGTTCTTTTCAAGAGCAATCTAATTTCTTTAAGTCTTTGGCATAAT
 TCTCTCTTTCTGATGACTTTTATGAAGTAACCTGATCCCTGAATCAGGTGTCTTACTGAG
 CTGATCTTTTAAATCTTTCGTTTAAATAGGCTGCTCTCAGGGACCAAGATAGATAAGCTTAT
 TTGATAATCTTAAAGCTCTTTGGAAGCTTGTTCATTTCCATAATTTCCAGGTCAACACTGT
 TTATCCAAAACCTCTAGGTCAGTCTTTTGTGTTGCTTTTGTGATTTCGACAGCTTGTAGTCTG
 CCTGACATCTCTGATGXTTCCCAATCACTGCTTCCAGTTCCAGGTGGAGACTTCTTCTTCT
 GGAGCTCAGGCTGACAATGCCCTCTTGTGXTCCCT

FIG. 1A

11731.2contig

AGCCAGATGGCTGAGAGCTGCAAGCAAGAAGTCAGGATCATGATGGCTCAGTTTCCCACAG
 CGATGAATGGAGGGCCAAATATGTGGGCTATTACATCTGAAAGAACGTACTAAGCATGATA
 AACAGTTTGATAACCTCAAAGCTTCAGGAGGTTACATAACAGGTGATCAAGCCCGTACTTT
 TTCTCTACAGTCAGGTCTGCCCCGCCCGGTTTATGCTGAAAATATGGGCTTATCAGATCTG
 AACAAAGGATGGGAAAGATGGACCAGCAAGAAGTTCTCTATAGCTATGAAACTCATCAAGTTA
 AAGTTGCAGGGCCAAACAGGTGGCTGTAGTCTCTCTCTCTCTATCATGAAACAAACCCCTATGT
 TCTCTCCACTAATCTCTGCTCGTTTGGGATGGGAAGCATGCCCCAATCTGTCCATTCTATCAG
 CCATTGCCCTCCAGTTTGCACCTATAGCAACACCCCTGTCTTCTGCTACTTCAGGGACCAATAT
 TCCTCCCTAATGATGCCTGCTCCCTAGTGGCTTCTGTTAGTA

11734.1contig

AATAGATTTAATGCCAGAGTGTCAACTTCAAATGATTGATACTGGCTGCTAGAGTGGCTGTG
 TTGAGTAGGTTTCTGAGGATGCCACCTGGCTTGAAGAGAAAGACTGGCAGGATTAACAAT
 ATCTAAAATCTCACTTGTAGGAGAAACCAACAGCCACAGAGCTGCCACTGGTGCTGGCAC
 CAGCTCCACCAAGGCCAGCGAAGAGCTCAAAATGTGAGAGTGGCCGTCAGGCTGGCACCAG
 CACTGAAGCCACCAGTGGTCTGGCACTGGCACTGGCACTGTTATTGGTACTGCTACTGGC
 ACCAGTCTGTGCCACTGGCACTCTCTTGGGCTTTGGCTTACGTTCTGCTCCCCCTGGATCC
 GGGCTTTGGGCCAGGGTCCGATATCAGCTTGGTCCGAGTTGCCAGGGCCCGGCAGCAATCTC
 CGAGCCGAGCCCAATCCCAATTGAGCTCTAATCTCGGCCCTAGCCCTGCTTCACTGCA
 GCTCAAGCTGCAGCTTCAAATCCGCTTCCAAGCCCTCTCGGTAC

11734.2contig

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 GAGTCAGGCTTCTGGAACACAGGTGGCCGAAGCGTCTCAAAGGCCCTAATGCCCTCAAT
 GGGCCGAGGGCTTCAAAGCGGTCCATAGCTTTTGGGCCCCGAGGGCATCAAGGATCG
 GTTGGCTGCTTGGGCCCCGAGAGGCTTGTCTCTCTCTGAGATCACCTAAAGCCCCGTAGGGC
 AAGCCCTGGGGTAGAGCTGGCAAGGTCTAGTCATCCCAAGAGCCCTGAACCCACCACCT
 CCGGATGTGGCCCTTTTGGCAAGCGGACCCCAATGATTGTGAACTACCTTTTGGCTAAG
 ACCAGACCAAGATTCGCATCAAGGCTTGGACATGCTGAGGACATCATCAAGAATACA
 CTGATCTGTAGCCCCCAATCAATTAAGCAGCAGGCTATTCTTGGAGCAAGOTATTTGGGAT
 TCAATTGAAGCAAAATGATTAAGAAATCAACCACTTGTACATTCTTCTCAGC

11736.1contig

GAGGTCTCACTATGTTGCCACAGCTGTTCTTGAAGTCTTGGGATCAAGCAATCCACCCATG
 TTGGTCTCCAAAAGTCTGGGATCAAGGCTTGAGCCACCTCACCACGCCACCAATTTTCA
 ATCAGGAAGACTTTTCTTTCTTCAAGAACTGAAGGCTTTCCAGATATAGCTACACTATT
 GCTTGGCTCAGGGTCACTACAAATTCCTTCTTAAAGGTTACGATCGGTAAAGAAATAG
 ATTTTCTGAATGCAAAAATTAATGTGAAGTAATGAATTTAGGTAATACATATTCATAAA
 ATAATTATTCACATAATTCCTCAATTAACAGAGAAATATGTATGAAATGCTTTGAGTTTCT
 TGGAGTAACTCCATTAATCTATCCCAAGCAAGCCATTAATAAGTATCACTOATAATAAGAA
 CAACAGGACCTTGTATATAAATTTGGATAAGAGAAATAGTCTCTTGGCTGTTTGTCTTAAT
 TGATAAAAATTAATTTGTCACTCTTTTACTTCAGAAATCACAAA

FIG. 1B

11736.2contig

AAGCCGAAATGAGAAAGGAGGAAAATCATGTGGTATTGAGCGGAAAAGTGGTGGATGA
 CAGGGCTCAGTCCTGTTCGAGAACTCTGGGTGGTGGTGTAGAACAGGGCCACTCAGAGTG
 GGOTGCACAGACCAGCAGGGCTCTGTGACCTGTTTGTACAGGTCCATGATGAGGTAAC
 AATACACTGAGTATAAGGGTTGGTTAGAAAACCTTTACAGCAATTTGACAAAGTAATCTTC
 TGTCCAGTGAATCTAAAGAAAAAAATTGGGGCTGTATTGTATGTTTCCTTTTTCATTTTCAT
 GTTCTGAGTTACCTATTTTTATTGCAATTTACAAAAGCATCCCTCCATGAAAGGACCGGAAAT
 TAAAAACAAGGAGGTCCCTTATCACAGCACTGTGCTAGAACACAGTTGAGAGTTATCCAC
 CCAAGGAGCCAGGGAGCTGGGCTAACCACAAGAAATTTTGGTTTATCATCAAGTA
 CTTGAGTTGGAAATTGTTTAAATCCCATCATACCAGGCTGGAXGTG

11739-1&2

CCGCGGCTCCTGTTCAGACCCCTGACCCCTCCCTCCAAAGGCTCAACCGTCCCCCAACAACCG
 CCAGCCTTGTACTGATGTCCGCTGGAGAGCCCTGTGCTTAAAGTAAGAATCAGGCCTTATTG
 GAGACATTCAAGCAAAGGTTGGACAACCTACTTTCCAGAACAGAAAGGAAACTCATGCAT
 CAGAAAAGGTGACTAATAAAGGTACCAGAAAGAAATATGCTGCACAAATACCAGAAATCTGA
 TCAGATAAAACAGTTTAAAGGAATTTCTCGGGAACCTACAATAAACTTACAGAGACCTGCTT
 TTGCACTGTGTTACAGACTTCAGAACAAAGAGAACTAAACCTGAAAGAGACCACCTGTTC
 GAACATTCCTTACAGAAATAATTAATAATGACACAAAGAAATATCCATGACATTTGAGGAA
 TATCATATTCAGCAGAAATGAAGCCCTGGCAGCCAAAGCAGGACTCCTTGGCCCAACCACGA
 TAGAGAAGTCTCTGATGATGAACCTTTGATGAAAGATTGCCAAGAGCTCCTTTATTGAAA
 TGAGGAGTCTCTGATGATGAATCCCTGAAAGCAGTAGCCACCATGTTCAACCATCTGTGAT
 GACTGTTTGGCAAAATCGAAGCCCTGGAGAAACAAAATTCCTATTACAGCAATAATCA
 CAATAGAAAGCTTTATTCTCACTCAATAATATGATGCAACAATGTTGAGGCCCTTATGA
 TTCAGCAGCTTGGTCACTTCAATAGAAAAATAACCAATGTTTCTTCAATGTTGACTGTTA
 ATTTAAAGCAACTTATGCTTCAATCATGATGATGCAAAAAATTTTATTACTCAAAAG
 TAAAAATAATGCA

11740.1.contig

GAAAAAAATATATAAGACACTTTTCCBAAAAGGTGGGCTTAAAGAGGAAAAGAAATTT
 CACCAATATAAATCCAAATTAATGAAGCTGACAAATTTAATCCAAAGAAATCACTTTTGTAAA
 TGAAGCTAGCAAGTGAATGATATGATGAAATAAAGCTGGAGGAAATAAATAACACAAGACTT
 GGCATAAGATATATCCACTTTTGAATTAAGCTTGTGAAGCATATTTCTTGCACAAATTTGT
 AAAGCCTTCTGATCTTCTTCTTCTTCAATTTCAATAAAGGAGGCATATCACATCCCAAGA
 GTAATAGAAAAAGAAAAAAGACATTTTTCATTTGAGATGAACCAAGACACAAAAACAA
 AACCAACAAGTGTGATGTCTAAATCTACCCCTCTGAATAAACCCTTGAACATCTCTACAA
 GGCACCTGATTTTGTAAATCTAACCTGAAGAAATGTGATGACTTTTGTGGACATGAAA
 TCAGATGAGAAAAGTGTGGTCTTTCGAAACCTGAACTCCCTGAAAACCTTTTGA

FIG. 1C

11766.1.contig

CTGGGATCAJTTCTCTTGAJTGTCATAAAAGACTCTTCTTCTCTCTTCTCATCTCTTCTTCTCAT
 CCTCTTCTGTACAGTGCTGCGCGGTACAAACGGCTATCTTTGTCTTTATCTCTGAGATGAAGAT
 GATGCTTCTGTTTCTCTTACCATAAAGTCAAGAAATTTCTGCTGGAAGTCTTTTACTGCTGGTGT
 TTTCTGACTTCACTTCTTTTGTCAAACCTGAGTCTTTTACCTCATGCCCCCTCAGCTTCCAC
 AGCATCTTCACTCTGGATGTTTATTTTCAAAAGGGCTCACTGAGGAACTTCTGATTTCAGAG
 GTCGAAGAGTCACTGTGAJTTTTCTCTCTCAJTTTGTCTGCAAATTTGCTCTTTGCTGTCTGT
 GCTCTCAGGCAACCCAJTTGTGTCTATGCGGGGCTGACAAAGAAACCTTTGCTCGATTAAGT
 GCGCTGGGTGTCCCAGGCCCATTTATATTAGACCTCTCAGTATACTTGGTGAATTTCCAG
 GAAACATAACACCAJTCATTCGATTTAACTATTGGAATTTGTTTT

11766.2.contig

GAGGGTTGGTGCTAGCGGCTTGGGGAGGTGCTGCTCTGTCTGCTCTTGGCTCTCTCGCAAGG
 TCCCCCGGCTCCCTTCTGTTTCCCCCCCCGGTGGCTGCGTGGCGGAGTGTGTGCGAGGG
 AGGGGGAGGGGCTCGGGGGGGGTGGGGGAGGGCTTCCGCTCCCAAGAGACCCCGGAG
 GGAGGGGAGGCTGTGAGGGACTCGGGGAAGCCATGACGCTCGAGAGGCTCCAGGAGGC
 GCTGAAAGATTTTGAGAAAGAGGGGGAAGGAAGTTTGTCTGTCTTGGATCAJTTTCT
 TTGTCAJGTAGCCAAAGACTGGAAGAAACAAJGATTCAGTGGTCCCAATTTAAAGGCTATTT
 ATTTCAAACTGGAGAAAGTGAJGGAJGAJTTCAAGAACTTCAGCTCTGAGCCAGAGGTC
 CTCCCAACCCCTAATGTGA

11773.2.contig

AAGCAAGCGGCTCCCGGCTGCGAGGGGCTGCGAAGTGGCGCGCGCGCGGCTCGCTCGCT
 CGCGCGCGCGCGCGCTGCGGACCCGGAAGATGCTGCGGAGAGTGGGCTGCGCGCGGCT
 GCGGCTGCGG

11773.1&2

ATCTCTGTATGCCAAATATTTAATATAAATCTTTGAACAAGTTCAGATGAATATAAAAT
 CAAAGTTTGCAAAAACCTGAAGATTAAGTTAATTTGTCAAAATTTCTCATTTGCCCCAAATC
 ACTATTTTATTTCTATGCAAAAGTATGCTTCAAACTGCTTAAATGATATAJGATATG
 ATACACAAACCAJTTTCAAJAGTAAAGCCAGTCAJCTTGCANTTGTAAJAAATAGGTA
 AAAGATTAAGACACCTTACACACACACACACACACACACCTGTGACCGGCAATGAC
 AAAAAACAATTTGGCTCTCTTAAATAAGAACATGAAGAGCCTTAAJTTGCTGCCAGGAG
 GGAACACTGTGTACCCCTCCCTACAAJTCAGGTAGTTTCTTTAATCCAAATAGCAAAJCT
 GGGCATATTTGACAGGAGTGAJTTGTGAAGCCAGGTTGAAATCTGTGCGGAACCAJTCAT
 GTCCACCCACTGCTGCTGCTGCAAAAAATCCCAATAATTTTCTGCTCCCACTTCTCTGCTG
 TCTTCCACATCTGACATAGACCCAGAGCCGCTGGGCTGCTGGCTGGGCAJCCCAJTTGCTG
 GTAGACCAAGTCAJAGGTCTCTCTTCAAGTCAACAGAAAGCATACACCAAAJTTGCTGCT
 CGGTCAJTTGTATAACCAJAGA

FIG. 1D

11777.1&2.cons

CAGACGGGGTTTCTACTATGTTGGCTAGGCTGGTCTTGAACCTCTGACTTCAGGTGATCTGC
 CTGCCCTTGGCCCTCCCAAAGTGGCTGGGATTACAGCCATAAGCCACTGCCCGGGCTGATCTG
 ATGCTTTCATAAAGGCTTTTCCCCCTTTTGGCTCAGCACTTCTCTCTCTGCCGCCATGTGAAG
 AAGGACATGTTTGGCTTCCCCCTTCCACCACGAATGTAAGTTGTTTCTGAGGCCTCCCCGGCC
 ATGCTGAACCTGTGAGTCAATTAAACCTCTTTCTTTATAAATTATCCAGTTTTGGGTATGTC
 TTTATTAGTAGAATGACAAACAGACTAATACAACCCCTTAAAGGAGACTGACGGAGAGGATT
 CTTCCTGGATCCCAGGACTTCTCTGAAATGCTACTGACATTCTTCTTGAGGACTTTAAACTG
 GGACATAGAAAACAGATTCCATGGCTCAGCAGCCTGAGAGCAGGGAGGGAGGCCAAGCTA
 TAGATGACATGGCCAGECTCCCCCTGAAGCCAGGTGTGGCCGAACCTGGGCAGTGTCTGAC
 CCACCCACCAGGGCCCAAGTCTGTCTTGGAGAGCCAAAGCCTCAATCACTGCTAGCCTCA
 AGTGTCCCCAAGCCACAGTGGCTAGGGGAGCTCAAGGAAACAGTTCCAGTCTGCCCTACTT
 CTCTTACCTTTACCCCTCATACCTCCAAAGTAGACCATGTTTCATGAGGTCCAAAGG

11779.2.contig

AAGCGAAGGAAGCCACTGCCGCTCCTGGCTGAAAAGCGCGCCAGGCTCGGGAACAGAGG
 GAACCCCAAGAACAGGAAGCGAAGCTGCAAGGCTGAAAGGACAAAGCGAATGCCAGAGG
 AGCAGCTGGCCCGGGAGGCTGAAGCCCGGCTGAACGTGACGCCGAGCCCGGGAGACGG
 GAGGAGCAGCAGGCTCGAGAAAGGCTCAGGCTGACAGGAGCAGGAGCCACTGCA
 GAAGCAGAAAAGCAAGCCGAAGCCCTGCTCCCGGAAGAGCTGAGCCCGCAGG
 AGCCGGGAAAAGCACTTTACAGAACAGGAACAGCGAGAGACAAAGAGCGAAGAAAGCCGCTG
 GAGGAGATAATGAAGAGGACTGCAAAATCAGAAAGCCGCTGAAACCAAGAAAGCAAGATGC
 AAAGGAGACCCAGCTAACAAATCCCGCCGAGACCTTTGTGAAAGCTGTAGAGACTCGGC
 CCTCTGGCTTCCAGAAAAGGATTTCTATTCCAGAAAGGAAGCAGCTGCGCCCCCAXGGA

11781 & 37.cons

CTCTGTGAAAAGCTGATGAGGAATGAATTACCAATACCCATGTTCTCATCCCCAAGCAAA
 GTGCTGGGTCTGATTACTGCAACACAGAGCAACCAAGAGAACTTTTCTCATACAGGATC
 AGCAGCGGCTCATACACTGGGCTCGAATTCATACTACCCACACAGAGCCGCTTCTCTC
 CAGTGTGACCTACAGACTCACTCTCTTACCAGATGATGTTGCCAGAGTCAGTAGCCATT
 GTTTGCTCCCCAAGTTCCAGGAAGCTGGATTCTTTAAACTAACTGACCAAGCACTAGAGG
 AGATTCTTCTCTGCCCCAGAAAGGATTCATCCACACAGCAAGGATCCAGCTCTGTTCTG
 TAGCTGCAAGCCAGCTGACTGTTGTGACACAGGCACTGACCATCAACAGACTTCCATGAGC
 GTTTGAGTCCAAACAGCTTCCAAACAACAACAACCAATCAGTGTACTGTAGCCCTTAAT
 TTAAGCTTTCTAGAAAGCTTTGGAAGTTTGTGATAGTAGAAGGGGGGCAATCACTGGA
 GAAAGAGCTGATTTGTAATTCAGCTTTGAAAGCAAAATTAAGTGAACATTTTLAGGCAA
 GTCAGAAAGAGAACATGCTGCTCCCAAGCAAGCTGTAACTCAGAAATTAAGTTACTCAGA
 AATTAAGTAGCTCAGAAATTAAGAAAGAAATGGTATAATGAACCCCATATACCTTCTCTC
 TGGATTACCAATTTGTTAAGATTTTCTGCTCAGCTATCCTCTAAATTTCTCTTAATTT
 AATTTGTTTATATTACCTCTGGGCTCAATAAGCCCATCTCTGCCAGAAATTTGGAAGGCAT
 TTAGAAAATCTTTTGAATTTCTCTGCTTTATGGCAATATGAATGGAGCTTATTACTGGG
 GTGAGGACAGCTTACTCCATTTGACCAAGATTTTGGCTAACACATCCCCAAGAAATGATT
 TTGTCAGGAATTAATGTAATTAATAAATAATTCAGGATATTTTTCTCTACAAATAAAGTAA
 CAAT

FIG. 1E

11781-76-87J7

CTCTGTGGAAAACCTGATGAGGAATGAATTTACCAATTACCCATGTTCTCATCCCAAGCAAA
 GTCTGGGTCTGATTACTGCAACACAGAGAAGCAAGAACTTTTCTCATACAGGATC
 AGCAGGGGCTCATCACTGCGCTCGATTCTACTCACCACACAGACCGCTTTCTCTC
 CAGTGTGACCTACACACTCACTGCTCTTACCAGATGATGTTGCCAGAGTCAGTAGCCATT
 GTTTGCTCCCGAAGTTCCAGGAACTGGATTCTTTAACTAACTGACCATGGACTAGAGG
 AGATTCTTCTGTGCGCAGAAAGGATTTCATCCACACAGCAAGGATCCACCTCTGTTCTG
 TAGCTGCAGCCACGTGACTGTTGTGGACAGAGCAGTGACCATCACAGACCTTCGATGAGC
 GTTTGAGTCCAACACCTTCCAAAGAACAAACCAATATCAGTGTACTGTAGCCCCCTTAAT
 TTAAGCTTTCTAGAAAGCTTTGGAAGTTTGTGTAGATAGTAGAAAGGGGGCATCACCTGA
 GAAAGAGCTGATTTTGTATTTACGTTTGAAGAAATAAAGTGAACATATTTTTAGGCA
 GTCAGAAAGAGAACATGGTCAACCAAGCAACTGTAACTCAGAAATTAAGTTACTCAGA
 AATTAACTAGCTCAGAAATTAAGAAAGAAATGCTATAATGAACCCCATATACCCTTCTTC
 TGGATTCAACCAATTGTTAAGATTTTTCTCTCAGCTATCCTTCTAATTTCTCTAATTT
 AATTGTTTATATTTACCTCTGGGCTCAATAAGGCCATCTGTGCAGAAATTTGGAAGCCAT
 TTAGAAAATCTTTTGGATTTTCTGTGTTATGGCAATATGAATGGAGCTTATTACTGGG
 GTGAGGGACAGCTTACTCCATTTGACCAGATTGTTTGGCTAACACATCCCGAAGAAATGATT
 TTGTGAGGAATTATTTTATTTAATAAATAATTCAGGATATTTTCTCTACAATAAAGTAA
 CAATTA

117841 & 2

GGACGACAAGGCCATGGCGATATCCGATCCGAATTCAGCCCTTTGGAATTAATAAACCCT
 GGAACAGGGGAAGGTCAAACTTGGATGTCATGCTTCCATATCTATACCTTTGTGCACACT
 TGAATGGGAACCTGTTGGCTTAGGCCATCTTAGAGTTGATTTGATGGA.AAAAGCAGACAG
 GAACCTGCTGGGAGCTCAAGTGGGGAACTTGGTGAATGTGGAATAACTTACCTTTGTGCTC
 CACTTAAACCAAGATGTCTTCCACCTTTCTGACATGCAAGGATCTACTTTAATTCACACT
 CTGATTAAATAATTTGAATAAAAGGGAATTTTGGCAGCTGATATATCTGCCAGGCTATG
 TACAGTAGGAAGGAATGCTTTCCCTTAAACACCCCAATGCCACTGCTGACCTTATAAAT
 TATTTAATAAATCAACTATATC

11785.2.contig

GCCAGTGACATTCACCAATATGGGAAGCACTTCCCTTTCTCAGGATTCTCTGTAGTGG
 AAGAGAGCACCAGCTGTTGGGTGAAACATCTGAAAGTAGGGAGAAGAACCTAAAAATA
 ATCAGTATCTCAGAGGGCTCTAAGGTGCCAAGAACTCTACTGGACATTTAAGTCCCAAC
 AAAGGCATACTTTCCGAATCCCAACTCAAACTTTCTAACTTCTGTCTCTCTCAGAGACA
 AGTGAAGCTCAAGAGTCTACTGCTTACTGGCAACTACAGAAAACCTGCTGTTACCCAGAA
 AAACAGGAGCAATTAAGAAATGGTTCGAATATTTCAAGCTCCGCAACAGGATGTGCTTT
 CTTTGGCCCAATTAAGCTTTCTTCTCTTCTTTCTCTTTAATAACCACT

FIG. 1F

11713-1&2 cons

TGCGCTGAAAACAAACGGCTCTCTTACTGTAAATGCAAGCCACAGGTGCTTAGCCGTGGG
 CATCTCAACCACCAGCCTCTGTGGGGGGCAGGTGGCGCTCCCTGTGGGCCTCTGGGCCAC
 GTCCAGCCTCTGTCTCTCTCGCTTCGGTCTCTCGACAGTGTTCGGGCATCCCTGGTCACTTG
 GTACTTGGCCTGGGCCCTCTGTGTGTCTCCAGCAGCTCCTCCAGGXGGTGGGCCGCTTCA
 CCGCAGCCTCATGTTGTGTCCGGAGGCTGTCTACGGGCTCTCTCTCTCCGAGGGCTGT
 CTTACCCCTCCGGXGCACCTCTCCAGCTCCAGCTGTGGGGGGCTTGACGCTGGCCAGC
 TCGGCCCTGGCCTGGCCGGTCTCTCTCTCARAGGCTGGCAGCCGGTCTCTCGAACTCTGGC
 GGATCACCTGGGCCAGGTTGCTGCGCTCGCTAGAAAGCTGCTCTCTCACCGCCTGGGCATC
 CTCCAGCCCGCCTCTCTCTGCCCCACAAGGCCCTGCAGACGCAGATTCTCGCCCTCGGCCT
 CCCCCAGCTGGCCCTTCAGCTCCGAGCAGCCCTCTCTGAAGCTTCGGCTCCGACTGCTCCAG
 CTCGGAGAGCTCGGCCCTCGTACTTGTCCCGTAAGCGCTTGATGCGGCTCTCGGCAGCCTTC
 TCACCTCTCTCTTGGCCAGCCCACTGTCCGCTCAGCTCTGTTCGGGTTCCAGCAGCCAGCC
 CTTGTCTCCGGCTTTCGGGATTTCTTCCCTCAGCTCTGTTCGGGTTCCAGCAGCCAGCC
 TCTCTCTCTCTGTGTGGGGGGCTTCCACGCTGTCTCTCTCACTTCCAGCTGCTCTCTCAG
 GGTATTCACTCCATCTGGCGGGCTGCAGCCTGGCCA

13690.4

CAACTTATTACTTGAAATTATAATATAGCCTGTCCGTTTGCTGTTTCCAGCCTGTGATATAT
 TTTCTAGTGCTTTCAGCTTAAAAATAAATAAGGTTTAAATTTCTCCCT

13693.1

TGCAAGTCACGGGAGTTTATTAATTAATTTTTTCCCGAGATGGAGACTCTGTGGCCAGC
 CTGGAGTGCAATGGTGTGATCTTCCCTCACTGCAACCTCCAGCTCTGGGTTCAAGCGATT
 CTCTCTCCACAGCCTCCCGAGTAGCTGGGATTACAGGTCCCGGCCACACCCAGCTAAT
 TTTATAATTTTAGTAAAGACAGGCTTTCCCGATTTGGCCAGGCTGGTCTTGAACCTTCTGA
 CTTCAAGTGAATCCACCTGCTCCGCTCCCGAAGTGTGGGATTAACAGGCTGAGCTACCC
 GTCCCTGGCCAGCCACTGGAGTTTAAAGGACAGTCACTTTGCTCCAGCCTAAGGCGGCA
 TTTTCCCGCATCAGAAAGCCGGGGCTCTCTTACCTCAAAATAGGGCAGCTGTAAAGTCAG
 TCAGTGAAGTCTCTCTCTTAACTGCGCCAGCCGGGGCATTTGGCTCTGACACAGCCTTGGC
 AGGAGCCCTGCACTCTCAALAGAAAGCTTCACTTCTCTTCCG

13694.1

CAGAGAACTCAAGAAAGATGTGCGCTTTTCTTTTAATGAATGAGAGAGCCCATTTGTATC
 CCTGAATCATTCAGAAAGCCCGGGCTCGGACAGCGCCGACCTAGGGATCGATCTCGAG
 GGACTTGGGGAGCCTCCAGAGAGCTTATAGCTCGAGCGCCAGCGACCTCTCTGGCGGATCC
 CTGGGGAGCAGATGGACCTACTGGAATGCACTTGGATTACAGATTCTCTCAGCAAGATAC
 TCTTGGCTGATAATTCAGAGTTCTCAGCCTGAAGCCAGGTTCTAGAGGATGATTCTGGT
 TCTCACTTCAGTATGCTATCTCGACAGCTTCTTAACTCTCAGACCCACAAAGAAATCCTG
 TGTTCGATGTTGNGTCCAATCCTTGAACAAACAGCTCGAGAAAGAACGAGACCCGGTA
 TAGTGGGTTCAATGAACAATTCGAAAGAAACACAGTTCCAGACCTG

FIG. 1G

13694.2

GACTGTCTTGAACAAGGGACCTCTGACCAAGAGAGCTGCAGGAGATGCAGAGTGGTGGCAG
 GAGTGGAAAGGCAAAAGAACCCACCTTCTCTCCCTTGAAGGAGTAGAGCAACCATCAGAAG
 ATACTGTTTTATTGCTCTGGTCAACAAGCTTCTCTGAGTTGACAAAACCTCAGGCTCTGGT
 GACTTCTGAATCTGCAGTCCACTTCCATAAGTTCTTGTGCAGACAACCTGTTCTTTTCTTC
 CATAGCAGCAACAGATGCTTTGGGGCTAAAAGGCATGTCTCTGACCTTGCAGGTGGTGG
 ATTTTCTCTTTTACAACAATGTACATCTTACTGGGCTGTGCTGTCAAGGGATGTCCTTGC
 TGGACTGTTCTGCTATGGGGAATCTTCTGTTGGACTGTTCTTCACTGCTTAATTGCAGTATTA
 GCATCCACATCAGACAGCCTGGTATAACCAGAGTTGGTGGTACTGATTGTAGCTGCTCTT
 TGTCCACTTCATATGGCACAAAGTATTTCTCTCAACATCTGCTGCTCTGGGAAG

13695.1

GAAATGTATATTAAATCAATCTCTTGAACGATCAGAAGCTCTRAAATCAGTTTTCTATAACAR
 CATGTAATACAGTCACCCGTGGCTCCAAGGTCCAGCAAGGCAGTGGTTAACACATGAAGAG
 TGTGGGAAGGGGGGCTGGAAACAAGTATTTCTTTCTTCAAAAGCTTCATTCTCAAGGCCT
 CAATTCAGGCAATCATTTGCTCTTCTTCAAAAAGTCTGTGTGTGCTTCATGGAAGGTATAT
 GTTTGTGCTTAAATTTGAATTTGTGCTCCAGCAAGGCTCTGGAGATCTAAATTCAGAGTAAG
 AAAACCTGACCTAGAACTCAGGCAATTTCTCTTACAGAACTTGGCTTGCAGGCTAGAAATGA
 ANGGAAAGAAACTTACAGCTCAACAAGCTGAAGATAATCCCATCAGGCAATTTCCCATAG
 GCTTTCACACTCTGTTCACTCAGAGATGTTATCTG

13696.2

AGTCTGAGTGAACAAACAGAGCAACAAACARRAGAAGCCAAAAGCAAGAGGCTCCA
 ATATGAACAAGATAAACTATCTTGAAGACATATTAGAAGTTGGGAAAATAATTCAATGT
 GAAGTAGACAGTGTGTTAAGAGTGAATAAGTAAATGCAAGCTGAGACAAAGTGCATCCCC
 AGATCTCAGGACCTCCCTGCTGCTCTCACTCTCCGAGTGAAGGACAGGATAGTGCATG
 TTCTTTGTCTCTCAATTTTAGTTATATGCTCTGTAATGTTGCTCTGAGGAAGCCCCCTGGAA
 AGTCTATCCCAACATATCCACATCTTATAATCCACAAATTAAGCTGTAGTATGTACCTTA
 GACGCTGCTAATTCAGCTGCTCACTTCCCAACTCAGGGGCGCTGCATTTAGTAATGGGTGA
 AATGATTCACTTTTATGATGCTTCCCAAGGTGCTTGGCTTCTTCTTCCCAACTGACAAATG
 CCCAAGTTGAGAAATGATGATATATTTAGCATAAACCGAGCAATCGGGGACCCC

13697.1

TAGCTGTCTTCTCACTCTTATGGCAATGACCCCAATCTTAAATGGATTAAAGATAATGAAA
 GTGTATTTCTTACACTCTGTATCTATACCAAGCTGAGGTGATAGCCCGCTTGTCTATTGT
 CATCCATATTTCTGGCACTCAGCGGGCACTTTCTGGAATATTGCCACCGACCATGGCAGA
 GGGGCACAGTGCATTTCTGGGGAAATGCACATTTGCTCAGCCTGGGTAAATGACTGATATAC
 ATTACCTCTGTTTCAAACTCAATGCCCAAGCACTCACAAGGCCCCACCAAAATACCAAG
 CCCAAGAAATGATGCTCTGTGATATGTTTGTCTGTGCTCCCAAGCCAAAATCTCATCTTGA
 ATTGTAAGGTCCCAATAATTCCTATGCTTTGTGGGACCGACCTGCTG

FIG. 1H

13697.1

ATCATGAGCATGTTACCAAAAGGATGGTACTAAACCAATTTGTAATCGTCTGTTTTACACT
 GCTTTGAAGA?ACTACCTGAGACTCGGTAAATTTATAAAACAAAAGAGATTTAATTGACTCAC
 AGTTCTGCA?GCTGGAAGAGGCTCAGGAACTTACAGTCAIGGTGGAAGGCCAAAGGAGG
 AGCAAGGCA?GCTTACATGTCAGTAAGAGAGAGAGCCAGAGCAGGAGAACCTGCCACTT
 ATAAACCAATTCAGATCTCATAACTCCTATCATGAGAAAACATGGAGGAAACCAACCTC
 ATGATCCAA?CACCTCCCGCCAGGTCCCTCCCTCGACACGTGGGGATTATAATTCAGGATT
 AGAGGGACACAGAGACAAACCAATATCATCATTCATGAGAAATCCACCCCTCATAGTCCAAT
 CAGCTCTACCAAGCCCCACCTCCAACTGGGGATTGCAATTCAACATGAGATTTGGATG
 GGGACACAGATTCAAACCATATCATAC

13699.1&2

CATGGCCCTTTCTCCTTAGAGGCCAGAGGTGCTGCCCTGGCTGGGAGTGAAGCTCCAGGCAC
 TACCAGCTTTCTGATTTTCCCGTTTGGTCCATGTGAAGAGCTACCACGAGCCCCAGCCTCA
 CAGTGTCCACTCAAGGCCAGCTTGGTCTCTTGTCTGTCAGAGGCCAGGCTGGTGTGACCTT
 GCGAACTTGACCCGGGAACAAACAGGTGGCCCAAGAGTGAAGTGTGGCCTGGCCCTCAACCT
 AGTGTCCGTCTCTCTCTCTCTGGAGCCAGTCTTGAGTTTAAAGGCCATTAAAGTGTAGATA
 CAAGCTCCTTGTGGCTGGAACAAACACCCCTCTGCTGATAAAGCTCAGGGGGCACTGAGGA
 AGCAGAGGCCCTTGGGGGTGCCCCCTCTGAAGAGAGCCGTCAAGCCATCAGCTCTGTCCCTC
 TGGTCTCCACAGTCTGTTCCTCACCTTCATCTCTGGAGCAGCTGCACCTGACTGCCAC
 GCGGGGCCAGTGGAGGCCACAGGCTCAGGCTGGCCGGGCTACCTGCCACCTTATGGCTTAC
 AAAGTAGAGTTGGCCCACTTCTCTCACTGAGGGGAGCACTCTGACTCTTAACAGTCTT
 CTTTGGCCCTCCCATCATCTCGGGTGGCTGGCTGTGAAGAAAAGCCCGGCACTCTTTCTAAA
 CACAGCCACAGCAGGCTTCTAGCCCATCTTCCAGCTGGGAAACAGTCTTAGATAAGTAA
 GGTGACTTGGCTAAGCCCTCCAGCAGCTTGAATCTTGGAGTCTACAGCAGACTGCATGT
 SAACAACTGCAAGCCGAAACATCCCTCACTATAAAA

13703.3

CCAGAACCTCTCTCTCTTGGACAATCGGAGGCCCTCTTGGAGACACAGAGGTTTCACCT
 TGGATGACCTCTAGAGAAATTCGCCAAGAGGCCACCTCTGGTCCCAACCTGCAGACCC
 ACAACAGTCACTTGTCTAGCCCTCTCTGTAGAAAGCTCACTTGGCTCCATTGCCCTCTCCA
 ACCAATGGCCAGGAGAGAAAGGCCCTTATTTCTGCCCCACCCATTCTCTGTACCAGCCT
 CCGTTTTAGTCAAGTGTCTCTGACCAAGCGTACCGTTACACAGTCA

13705.1

TGCATGTAGTTTTATTATGTGTTTTGCTCTGGAACCAAGTGTCCACCCAGCATGACTGA
 ACATCACTCACTTCCCTACTTGATCTACAGGCCCAACGCCGAGAGCCCAGACCAGGATT
 CAAACACACTGCCAGAGAAATTTGTCATCCGCTGTACGTAAAGTGTCCCTCACTGACCCA
 RACCTGTTACGTGGCACATCACTGTACAGTGGCACGTAAACAGCACTGTACTTTCTCCCA
 TGAACAGTTACCTGCCATGTA?CTACATGATTCAGAAACATTTGAACAGTTAATTCTGACA
 CTTGAATAATCCCATCAAAAACCCATAAATCACTTTGATGTTTCTAACGACAACATAGCAT
 CACTTTACGACAGAAATCATCTCCAAACAGAAACAAAGGAATACATACATCTTAAAAAATG
 CTGGGTGGGCCAGGCACAGCTTCAGCCCTGTAATCCCAAGCACTTTGGGAGGCTTAAGCG
 GGTG

FIG. 11

13718.2

AAACTGGACCTGCAACAGCCACATGAATTTACTGCARGGTCTGAGCAAGCTCAGCCCTCT
 ACCTCAGGGCECCACAGCCATGACTACCTCCCCCAGGAGCGGGAGGGTGAAGGGGGCCTG
 TCTCTGCAAGTGGAGCCAGAGTGGAGGAATGAGCTCTGAAGACACAGCACCCAGCCTTCT
 CGCACCAGCCAAAGCCTTAACTGCCCTGCCCTGACCCCTGAACCAOAAACCAGCTGAAGTCCCC
 TCCAAGGGACAGGAAGGGCTGGGGGAGGGAGTTTACAACCCAAAGCCAATCCACCCCTCCC
 CTGCTGGGGAGAAATGACACATCAAGCTGCTAACAAATTGGGGGAAGGGGAAGGAAGAAAA
 CTCTGAAAAACAAATCTTGT

13722.3

CATCGGTTTCACCACTGTTGGCCAGGCTGGTCTCGAACTCCTGGCCTCAAGCAATCCACCC
 GCTCAGCCCTCCAAAAGTGGCTGGGATTACAGATGTGAGCCATGGCACCATGCCAAAAGGC
 TATATTCTGGCTCTGTGTTTCCGAGACTGCTTTTAAATCCCAACTTCTCTACATTTAGATTA
 AAAAAATATTTATTCATGGTCAATCTGGAACATAATTACTGCATCTTAAGTTTCCACTGAT
 GTATATAGAAAGGCTAAAGGCACAAATTTTATCAAATCTAGTAGAGTAACCAAACATAAAA
 TCATTAAATTAATTTCAACTTAATAACTAATTCACATTCCTCAAAAACACCTGTTTTCAATCCT
 GATAGGTTCTTTAATTTTCAAAAATATATTTGCCATGGGATGCTAATTTGCAATAAGGCCG
 ATAATGADAATACCCCAAACTGGA

13722.4

GTTCGACCCCCACGGCACTGCAAAAGACACTTCTTCCCGAGCTGTGGCCGGCAGAAGCTGAT
 GTTCCTTTTATTAATGCTTCTGATCCBAATTTGATGAGATGTTTGTGGGTGTCCGAGCCAG
 CCGTATCAGAAATCTTTTACCGAAGCAAAAGCCGAATGCTGCTTGTOTTATATTTATTGAT
 GAATTAGATTCGTTCCTGGGAGACAGAAATCGAATCTCCAATGCATCCATATTCAAGCCAGA
 CCAATAAATCAACTTCTTCTGAAATGGATGGTTTAAACCCAAATGAAGGAGTTATCATAAAT
 AGGAGCCCAAAAATTTCCCAAGGCAATAGATAATGCTTAATACCCTCCTGGTGGTTTTGA
 CATGCAAGTTACAGTTCCAAAGCCAGATGTAAGGTCGAACAGAAATTTTGAATGGTA
 TCTCAATAAATAAAGTTTCATCAATCCCGTTGATCCAGAAATTATACCTTCGAGGTACTG
 GTGCTTTTCCCGAAGCAGAGTTGGCAGAAATCT

13724-13698-13748

GCCTACAACATCCAGAAAGAGTCTACCTGCACTGGTCTCTCAGAGGTGGGATGC
 AGATCTTCGTGAAGACCTCACTGGTAAGACCATCACTCTCGAAGTGGAGCCGAGTGACA
 CCAATGAGAAAGCTCAAAGCAAGATCCARGACAAGCAAGCCRTYCTCTCTGACCAGCAGA
 GGTTCATCTTTCCCGGAAAGCAGCTGGAAGATGGGCCACCCCTGTCTGACTACAACATCC
 AGAAGAGTCTYACCTGCACTCTGCTCTCGCTCAGAGGTGCGATGCARATCTTCGTGA
 AGACCTGACTGTAAAGACCATCACTCTCGAGGTGGAGCCCACTGACACCATCGAAGATG
 TCAAGCCAAAGATCCAACATAAGGAAGCCATCCCTCCTGATCACCAGAGGTTGATCTTTG
 CTGGGAAGACAGCTGGAAGATGCAACCACTCTCTGACTACAACATCCAGAAAGAGTCCA
 CTCTGCACTTGTCTCTGGCTTCAAGGCGGGTGTCTAAGTTTCCCTTTTAAAGGTTTCMAC
 AAAATTCATTCGACTTCTCTTCAATAAAGTTCTTGCATTCCC

FIG. II

13730.1

GAAGTGGGCGCTGAGGCCAAGTCATGCGCTTGTGTCCGGCATCTGCCGTGTACCTGTGTGCC
TGCCCTTCACCCCTCCCTGCTGCTTCTGAGCCAGCACCATCTCCAAATAGCCTATTCTT
CCTGCCAAATCACACACACATGCGGGCCACACATACCTGCTGCCCTGGAGATGGGGAAAGTA
GGAGAGATGAATAGAGGCCCATACATTGTACAGAAAGGAGGGGCGAGGTGCAGATAAAAGC
AGCAGACCCAGCGGCAGCTGAGGTGCA TGGAGCACGCTTGGGGCCGOCATTGGGCTGAGC
ACCTGATGGGCTCATCTCTGTGAATCCTCGAGGCAGCGCCACAGCAGAGGAGTTAAGTGG
CACCTGGGCGGAGCAGAGCAGGAGACTGAGGCTCAGAGTGGAGGCTAAGCTGCCCTGGA
ACTCTCAATCTTGGCTGCCCTAGTATGAAGCCCTTCTTGGCCCTACAAATCTCTGA

13732.1

ATGGATCTTACTTTGCCACCCAGGTTGGAGTGCAGTCTGCAATCTTGGCTCACTGGAGCC
TTAACCTCCCAGGCTCAAGCTATCCTCTGCAAAAGCCTTCCACATAGCTGGGACTACAGG
TACACNCCCACCACACCCAGCTAAATTTTGTATTTTTTGTAGAGACGGGATCTCGCCAC
GTTGCCCAGGCTGGTCCCATCCTGACCTCAAGCAGATCTGCCACCTCAGCCCCCAACGT
GCTAGGATTACAGGCTGAGCCACCCACCCAGCCTTTGTTTTGCTTTTAATGGAATCACC
AGTCCCCCTCCGTGTCTCAGCAGCAGCTGTGAGAAATGCTTTGCATCTGTGACCTTTATGA
AGGGGAACCTTCCATGCTGAATGAGGCTAGGATTACATGCTCTTTCCTGTTCCGGGGGCTCAAG
AAAGCCTCAGACTCCAGCATGATAAGCAAGGTCAG

13732.2

ATAGGGGCTTTAAGGAGGGAAATTCAGGTTCAATGAGGTGTAAGGCCAGGGCTCTTATCC
AGTAAGACTCGGGTCTTAGATGACAAAGAGACACCCGAGCTCCTTCTCTGCGGTGTG
AGGATGCATCAAGAAAGCGGCGCTGTGCAAGCGAAGGAGAGGCGGACCCAGAAACCGAC
ACCTTCATCTTGGACTTCCAGGCTCTAGAACTGAGAAATAAGTGTCTGTGGTTAAGCCA
CCCACTTCTAGTAATCTCTTAAGGCTTCTTAAGCAGACTAAGAAACAAACAGCCAAAT
AACTGATGGCTTCCGTGTCTTCTGTAAATTTGCTATGAGAGAACTTTCACTCACTGTTTT
GCAGTTTCTCCCTCAGTCCCTGCTTCTTCTTCTACATAATCCCAATTTCAATTTATAGTT
ATGGCCAGGCGAGTCAATTCATCAGCCATCTCTGAGCTAAACCAGCAGCTGCTCTGCT
CACTTCTTCACTGCTGCTCATCATCAGCCCTCTTCCAGAGATTTCATTTCTCTCCGTTGCCA
GGTACTTCACCCACCAAGCTCA

FIG. 1M

13732.1

GGATAATGAAGTTGTTTTATTTAGCTTGGACAAAAAGGCATATTCCTCTATTTTCTTATAGA
 ACAATATCCCCAAAATAAAGCAAGCATATAATCTTGAATGTGTAAATAATCCAGTGATA
 AACAGAGCAGTACTTTAAAAGAAAAAAATATGTATTTCTGTACGGTTAAAAATGAGAA
 TCAAAACCAATTAAGTCTGCTAACTCAATATTTTTGCTTTCTTTTGGTTAAGAGAGGCAAT
 GCAATACACTGAAAAAGGTTTTATCTTATCTGGCAATGGAATTAGACATATTCAAAACCCC
 AGCCCCCATTTCCAAACTTTAAGACCACAAACAAAGTAATTTACTTTTCTGAACATTGGTTTT
 TTCTGGAATAATGGGAATTAATAAATAGACTTTGACAGACTCTTATGAGATTAAATAAGATA
 ATGTATGAAAATCTTTCTTTCTTTTACTTCTTTTCTTTTGGAGATGGAGTCTCACCCCGT
 CACCCAGGCTGGAGTACAGTG

13732.2

CCACTGCACTCCAGCCTGGGTGACGGAGTGAGACTCTGTCTCAAAAAACAAACAAACAA
 ACAACAAAAAACTGAAAAAGGAAATAGAGTTTCTCTTTCTCATATATGAATATATTATTT
 CAACAGATTGTTGATCACTACCATATGCTTTGGTATTTGTTCTAAATGCTGGGGATACAGCA
 AGAGGTTCTGAGAACTTCATGGAGCATGAAAGTAAATAAACAAAGTTAAATTCAAAGCCC
 AGGATGGTTGCTCACACCTTTAGTCCAGCAGCTTTGGGAGGCTGAGGAGGCTGGATCACT
 TGGGCCAGGAGTTCAAGGCTGCAAGTCAAGCCAAAGATTGTGCCACTACTCTCCAGGCTGGG
 CAACAGAGCAAGACCCCTGTCTCAAGGCGCAACAAAAAGTTAAATTCAGATTGTTAAAGTG
 CTGTAAAGGAAGTAAATAGCTTGATAATCAAGAGAGCACCTGAAGGCCAGGCGTGGTGGC
 TCACCCCTGTGGTCTAACGCTTTGGCAAGCCCGAGCGGGGGATCACAAGGTCAGGAGAA
 TTTTGGCCAGGCATGGTG

13736.1

AGAAATCCATTATGGGCTTTAACTAGTTACACAAGTGAATCAGTTTGGCACTACTTTA
 TACAGGGATTACGCTGTGTATCCGAGACTTAAATACTGTACCAGGACCAGTCTGTGTCT
 TAGGTCTGTATTCAGTCAATTCAGCATGTAGATACTAAATAATAGTGTAGTTTCTTTAA
 GGAAGACTGTACAGGCTGTGTGCAAGATGACATTCACCAATTTGTGAATTAATTCACCCC
 ACAAGATACCTTCAGTCTATAAAGTCTCTATAGGCAACATGTGGTGTAGCATTOGAGAG
 ATCCACACAAAAATGTTACATAAAAGTTGAGACATTTCTAATGATAAGTGAAGTCAAAAAA
 AAAAAAACCCCAATCTCAATTTTCTAAGCAAGATAAAGCAAAATAATTTAAAAACACAAA
 AAATGGCATTACGTGGGTACAAACC

13737.1&2

CAAAATTTAAATATAAATCTTTGAAACAAAGTTGAGAKGAAATAAAAATCAAAGTTTGCAA
 AAACCTGAAAGATTAACTTAATTTGTCAATATTTCTCATTTGCCCCAATCAGTATTTTAA
 TTTCTATGCAAAAGTATGCTTCAAACTGCTTAAATGATATATGATATGATACACAAACCA
 OTTTTCAAAATAGTAAAGCCAGTCACTTGGCAATTTGTAAGAAATAGGTAAAGATTATAAG
 ACACCTTAC
 AATTTGGCTCTCTCTAAATAAAGACATCAAGACCCCTTAATTTGCTCCAGGAGGGAAACAC
 TGTGTACCCCTCTCTCAATTCAGGCTACTTTCTTTAATCCAATAGCAATCTGGGCATAT
 TTGAGAGGAGTGATTCTGACAGCCACGCTTGAATTCCTGTGCGGAACCAATTCATGTCCACC
 CACTGGTGGCTCTCAAAAAATGCCAATAATTTTCTGCTCCACTTCTGCTCTCTCTTCCA
 CATCTGCACATAGACCCAGACCCGCTGCCCCCTGGCTGGGCATGGCATTTGCTGGTAGAGC
 AAGTCATAGGTCTGCTCTTTGACCTCACAGAAGCGATACACCAAAATGCTGTGCTGGTCAJ
 TGTCATAACCAAG

FIG. 1N

13738.1

TTTGACTTTAGTAGGGGTCTGAACTATTATTTTACTTTGCCMGTAAATTTARACCYTATA
 TATCTTTCAATATGCCATCTTATCTTTCTAATGBCAAGGGGAACAGTGTCTAAMCTGGCTTCT
 GCATTWATCACATTAATAAATGGCTTTCTTGGAAAATCTTCTCATATGAAATAAGGATCTT
 TTAAGCCATCATTTAAGCMGGNTTCTCTCCAACACGAGTCTGCTASGGGGGGKAGCT
 CTGAACCTCTGGCTGAAGGCTTTCCCATACACACTGCCAATGACMTGGTTTCTGACCAGBOTG
 AGTTA

13738.2

AGAGAAGCCCCATAAAATGCAATCAGTGTGGGAAGGCCCTTCAGTCAGAGCTCAAGCCTTTT
 CCTCCATCATCGGGTTCATCTGGAGAGAAACCCCTATGTATGTAATGAAATGCCGCCAGAGCC
 TTTGGTTTAACTCTCATCTTACTGAACACGTAAGGATTCACACAGGAGAAAAGCCCTATG
 TTTGTAATGAGTGGGGCAAAGCCTTTCCCTGGAGTTCCACTCTTGTTCAGCATCGAAGAGT
 TCACACTGGGGAGAAAGCCCTACCACTGCGTTGAAATGTGGGAAAGCTTTACGCCAGAGCTC
 CCAGCTCACCTACATCAGCCGAGTTCCACTGGAGAGAAAGCCCTATGACTGTGGTGACTO
 TGGGAAGGCCCTTCAGCCGGAGOTCAACCTTCATTGAGCATCAGAAAGTTCCAGCGGGAGA
 GACTCGTAAGTGCAGAAAACATGGTCCAGCCCTTGTTCATGGCTCCACCCCTCACAGCAGAT
 GGACAGATTCCCACTGGAGAGAAAGCAGCCAGAAACCTTTAACCATGGTGCAAAATCTCAT
 CTGCCCTGGACAGTTT

13739.1&2

GAGACAGGCTCTCACTTTCTCAACCCAGCCCTCGAATGCCAGTGGTGGCATCTTACGTAGCTCA
 CTGACGCCCTGACCTCTCTGGACTCAAAATTTCTGCTGCTCAGCCCTGCCAAGTAGCTGGG
 ACTGTGGGTGCAATGCCACCATGCTCTGCTAATCTTTGTAGTTTGTGTAAGAAGGGGTTTT
 GCCATGCTGGACATGCTGCTTTGAAGTCTGTGAGTCAAAAGCATCTGCCACCTCGGCTC
 CCAGAAATGTTGGGATTACAGGGGTAAACCAACAGCCCTGCCCCATTAGGGTATTTCTTAGC
 ATCCACTGCTCACTGAGATTAATCATAAAGAGATGATAAOCACCTGGAAAGAAAATTTT
 ACTAGCCTTGGATATTTTCTCTTTTCAAGCTTTATACAGAGCATGGATCTTTAGTTTTC
 CTTAACTGATAATAAAACATTAAGGAAATTAAGTTTACCTGAGATTACAGAGATAAC
 CCGCATCACTCCCTGCTCAATCCCACTTTTCCACATCAATTATTTTACAGAGGTCCAGGA
 TAAAGCCCTTAGTCTCTCTTCCGACCTTTCTTCCACTTTTGTAAACCTGTGGCTGACA
 AATGGAATTTGACAGCGTATGCCATGACTATCCATTTGTCAGGCTACGCTGTCAATTTT
 CCACCAATCCCTTGTCTCTCTTTGGAGAGATCTTCTTATCAGCTAGTCTTTGGCAAAAGTA
 ATTGCAACTTCTCTAGCTATTCTATTGCTCCCTTCCACTGCTGGAACCCCTGGGACCAGGA
 CTAAACCTCCAG

13741.1

ATCTCATATATATATTTCTTCTGACTTATTTGGTTGCTTCTGNCACCCATTTAAAAATATC
 ACAGAGACCAAAATAGAGCGGCTTTCTGTTGGAAAGCATGGCAGTCAACAGGACAAAATAC
 AAAACTAGGGGGCTCTGCTTCTCTATACATCAATTTTCAAGTATTTTTTTATGTACA
 AAGAGCTACTCTATCTGAAALAAATTAATAAATGAGACAAATAGTTTATGTCATC
 CTAGCAAGAAAGAAATGGGAAGCAAGCAAGGGGACGTTGGGTACAAATGCTGTCCCTGT
 TCCCAGGGACCACTACCTTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT
 GGGCAAGTGGCAAGGTAGGTGGGACCACTGAGACAGGAACCAACATATCTTTGGC
 CTGGAAAGATAAGGAGAAAGTCTCAGAAACCACTGGTGGGAAGCAATCCCAACNGGCCGT
 GCCCCAGAGCTTCCCACCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT
 GCTTCTGGGTGGGNCACCACTGGGCTTTGGGCCCCGTGTGGAAG

FIG. 10

13742.1

AAACATTGAGATGGAATGATAGCGTTTCCAGAAATCAGGTCCATATTTTAACTAAATGAA
AATTATGATTTATAGCCTTCTCAAATACCTGCCATACCTTGATATCTCAACCAGAGCTAATTT
TACCTCTTTACAAATTAATAAGCAAGTAACCTGGATCCACAATTTATAATACCTGTCAATT
TTTTCTGTATTAAACCTCTATGATAGTTTAAAGCCTATTAGGGTACTTAATCTTTACAAATAA
ACAGGTTTAAATCACCTCAATAGGCACTGCCCTTCTGGTTTTCTTTGACTAAACAAT
CTGAATGCTTAAGATTTTCCACTTTGGGTGCTAGCAGTACACAGTGTACACTCTGTATTCC
AGACTTCTTAAATTATAGAAAAAGGAATGTACACTTTTGTATTCTTTCTGAGCAGGGCCG
GGAGGCAACATCATCTACCATGGTACGGGACTTGTATGCATGGACTACTTTA

14351.1

ACTCTGTGCCCCAGGCTGGAGCCCBATCGMGCGATCTGACTCCCTGCAAGCTMCGCCTC
ACAGGWTGATGCCATTCTCCTGCCCTCAGCATCTGGAGTAGCTGGGACTACAGGGGCCAGC
CACCATGCCCAGCTAATTTTT

14351.2

ACCTTAAAGACATAAGGAGAAATTAATCTGGGAGAGAAAGCTTACAAATCTAAAGGTTTCTG
ACAAGACTTGGGAGTGATTACACACTGGAAACAACATACTGGACTTCACACTGGABAGAAA
CCTTACAAGTGTAATGATCTGTGGAAGGCTTTGGCAAGCAGTCAACACTTATTCACCATC
AGGCAATTC

14354.2

AGTCAGGATCATGATGGCTCAGTTCCACAGCGATGAATGGAGGGCCAAATATGTGGGC
TATTACATCTGAAGAAGCTACTAAGCATGATAAAGAGTTTGATAAECTCAAAGCTTCAGGA
GGTACATAACAGGTGATCAAGCCCTTACTTTTTCTACAGTCAGGTCTGCCGGCCCCCGG
TTTTAGCTGAATATGCCCCCTATCAGATCTGAACAAAGGATCGGAAGATGGACCAGCAAG
AGTTCTCTATAGCTATGAAGTCAATCAAGTTAAAGTTCCAGGGCCAAACAGCTGCCCTGTAGT
CCTCCTCTCTATGATGAAGCAACCTGCTATGTTCTCTCCACTAACTCTGTGCTCTTTTGGGA
TGGGAAGCATGCCCAATCTGTCCATTGATCAGCAATTCCTCCAGTTCCACCTATAAGCAAC
ACCTTGTCTTCTGCTACTTCAGGGAGCAATTCCTCCTAATCATGCCCTCT

14354.1

CTTTCGATTTCTTCAATTTCTCAGCTTGAATTTATGAAGTTGTTCAAGGGGCTAACTGCTG
TGATTTATAGCTTCTCTGACTTCTTCAAGCTGATTTGTTAAATGAATCCATTTCTGAGAGCT
TAGATGCCAGTTCTTTTCAAGAGCATCTAATTTCTTTAAGTCTTTGGCATAATTCTTCC
TTTTCTGATGACTTTCTATGAAGTAAGCTGATCCCTGAATCAGGTGTGTTACTGAGCTGCAT
GTTTTAATTTCTTTGTTTAAATAGCTCTCTCTCAAGGACCAGATAGATAAGCTTATTTTGAT
ATTCCTTAAAGCTCTTGGTGAAGTTCTTGAATTTCCATAATTTCCAGCTCACACTGGTTATCC
CAAATCTCT

FIG. 1P

16431.1.2

GTGGAGGTGAAACGGAGGCAAGAAAGGGGGCTACCTCAGGAGCGAGGGACAAAGGGGGC
 GTGAGGCACCTAGGCGCGGGCACCCCGGCGACAGGAAGCCGTCTGAACCGGGCTACCGG
 GTAGGGGAAGGGCCCCCGTAGTCTCGCAGGGCCCCAGAGCTGGAGTCGGCTCCACAACC
 CCGGGCCGTGGGCTTCTCACTTCTGACCTCCCGGGCGCCCGGGCTGAGGACTGGCTCG
 GCGGAGGGAGAAAGAGGAACACACTTGAGCAGCTCCCGCTTGCTCGCAACTCCACTGCC
 GAGGAACCTCTCATTTCTTCCCTCGCTCTTCAACCCCCACCTCATGTAGAAAGGTGCTGAA
 GCGTCGGAGGGGAAGAAGAACCTGGGCTACCGTCTGGGCTTCCCMCCCCCTTCCCGGG
 CGCTTGGTGGGCGTGGAGTTGGGCTTGGGGGGCTGGGTGGGGCTTCTTTTTTGGAGTGCT
 GGGGAACTTTTTCCCTTCTTCAGGTACGGGGAAGGGGAATGCCCAATTCAGAGAGACAT
 GGGGGCAAGAAGGACGGGAGTGGAGGAGCTTCTGGAACTTTGCAGCCGTCTACGGGAGG
 CGCGAGCTCTAACAGCAGAGAGCGTCAACCGCTTGGTATCGAAGCACAAGCCGCATAAGTC
 CAAACACTCCAAGACATGGGCTTGGTGACCCCGAAGCAGCATCCCTGGGCACAGTTAT
 CAAACCTTTGGTGGAGTATGATGATATCAOCTCTGATTCGACACCTTCTCCGATGACATG
 GCTTCAAACTAGACCGAAGGGAGAACGACGAACCTGGTGGATCAGATCGGAGCGACCCG
 CTGCACAAACATCGTCACCACCAGCACAGGCGTTCCCGGACTTACTAAAAGCTAAACAG
 ACCG

16432-1

GACATGTTTGGCTGCACGGGACAGAGACAATGGGATTAGCCAGTCTCACTGTTCTTTAT
 OCTTCCAGAGAGGATGGGACAGCTCTCAGCTCAGAAATCCAGGCTGAGAAAGGCCATGCTG
 GTTGGGGGCCCCCGGAAGCAGGCTCCGATCTCTCTGGCATCAGCGTAGACCCGCTGCTC
 AGGCTTGGGTACCAAACTCATGCTCTOTACTGTTTTGGCCCCATCGGGTGAAGGAAAC
 CTAGAAAAAGATTTGCTGCTTAAAGGAATCAOCTGCGGCTCATCTCGGCATCCAAATGCT
 GGTGACAACTATTTCCCTCTCCGACGACAGACTCGGTGACTCCACACTGGGCTGAGTGG
 CCTCTGGAGGCTCTGTGGCTTAAGGACGGCTCCGTAAAGGCTGATCGGCTGAACTGGGTGG
 GGTCAAGGTTTCTGACCGTTTCCCTCCCATCCATAACCCCTGTCAATGAGCTCACACTGT
 GGTCA

16432-2

GATGGCATGGTCTTGTCTAATOTCCCTCTCGGATGGAGCACTTCTCTCTGTGAAGCCAGG
 GGACCCGCTCTGCTTGGAGCTTGGGGCAAGGAGGGAAGAGTGAATACCAGGAAGGTGGG
 GCTGCAGCCAGGGCCAGAGTCACTTACGGAGTGGTCTCTCGGCTCAAACTCTCTCG
 GGGACTGCTCAAGAGTGTGCTCCCTCGAGTTTGGCCCCAAGTTCTCTGGCCACCTTGGAA
 GGTGCTTGGCTGCTCCAGGCTCTAGCTCGGCTGATGGGTTTCTCCAGGACACAAGTATC
 ATTAAGCCACCTCTCTCTCAGCTTCTCAGGCGGACATGTGGGACAGGCTGTCTCACA
 CCGCTTGGCTTGGCTTGGCTTGGCTTGGCTTGGCTTGGCTTGGCTTGGCTTGGCTTGGCT
 CATCTCAGGAGGCTCAAAAGTCTCTCTGGGCAAGCTCTGCTTCTCTCTGACTGGAGGTCA
 TCTGGGCTTGGCTTGGCTTGGCTTGGCTTGGCTTGGCTTGGCTTGGCTTGGCTTGGCTTGGCT

172843

TAAAAAAGTETAACAAAGCTTTATTTAAGACTTTCTTCATGCCCCAGATCCAGGATGTCTA
 TGTAAACCGTTATCTTACAAAGCAAGCAATATTTGGTATAACTAAGTCAGTCACTTGC
 TTAAGTGAATACCGTCCATCCAAAGTGGTTTAAAGTAAACTACCTGACGATATTTGGC
 GGGATCTCTCAAGTTTGAAGTCTTGGGGGTTTGTTCAGGCTTCCGGTCTCTTTCTTGGC
 ACTCATCGGGACAGGATCTGTCTCTCTGTGGGGGCTGGAGCCCTTACGTGAAGCT
 GAAGGTATCGAGCTACCGGCTCTAGGCACTGGGACCTTCATCCGGAACTAACAAAGG
 TCGGGAGAGGCTCTTGGCTATGTGGC

FIG. 1Q

17190.2

CAAGTTGAACGTCAGGCTTGGCAGAGGTGGAGTGTAGATGAAAACAAAGGTGTGATTATC
AAGAGGATGTGAGTCCTTTGGGTGTAGGAGAGAAAGGCTGTTGAGCTTCTATTTCAAGAT
ACTTTTACCTGTGCAAAAAGCACATTTTCCACCTCCTTCTCATGGCATTTGTGTAAAGGTGAG
TATGATTCTATTCCATCTGCATTTTAGAGGTGAAGAATAACGTACAAGGGATTCAAGTAT
TAGCAAGGGACCCCTCACTAAGTGTGATGGAGTTAGGACAGAGCTCAGCTGTTTGAATCT
CAGAGCCCAGGCAGCTGGAGCTGGGTAGGATCCTGGAGCTGGCACTAATGTGAGGTGCAT
TCCTTCCAACCCAGGCTCAGATCCGGAAECTGACCGTCTGACCCCCGAAGGGGAGGCAG
GGCTGAGCTGGCCCGTTGGGCTCCCTGCTCTTTACACCACACTCTCGCTTTGAGGTGCTG
GGCTGGGACTACTTCACAGAGCAGC

17191.2&89.2

TGCCCTGGGCAGGATTTGGGAGAGAGGTAGCTACCCGGATGCAGTCCCTTTGGGATGAAGAC
TATAGGGTATGACCCCATCATTTCCCCAGAGGTCTCCGGCTCCTTTGGTGTTCAGCAGCTG
CCCTGGAGGAGATCTGGCCTCTCTGTGATTTCACTGTGCACACTCCTCTCCTGCCCTC
CAGACAGGCTTGTGTAATGACAACACCTTTGCCAGTGCAAGAAAGGGGGTCCGTGTGGT
GAATGTGCCCGTGGAGGGATCTGTGGACGAAGGCCGCTTGTCTCCGGGCTTGCAGTCTGG
CCAGTGTGCCCGGGCTGCACTGGACGTGTTTACGGAAAGAGCCGCCACGGGACCGGGCTT
GGTGGACCATGAGAAATCTCATCAGCTGTCCCCACCTGGGTGCCAGCACCAAGGAGGCTCA
GAGCCGCTGTGGGGAGGAAAATTGCTGTTCAAGTCTGTGGACATGCTGAGGGGAAAATCTCT
CACGGGGTGTGAAATGCCACGCCCTT

FIG. 1S

AGCCAGATGGCTGAGAGCTGCAAGAACAAAGTCAGGATCATGATGGCTCAGTTTCCACAG
CGATGAATGGAGGGCCAAATATGTGGGCTATTACATCTGAAGAACCTACTAAGCATGATA
AACAGTTTGATAACCTCAAACTTCAGGAGGTTACATAACAAGGTGATCAAGCCCGTACTTT
TTTCTACAGTCAGGTCTGCCGGCCCCGGTTTTAGCTGAAATATGGGCCTTATCAGATCTG
AACAAAGGATGGGAAGATGGACCAACAAAGAGTTCTCTATAGCTATGAAACTCATCAAGTTA
AAGTTGCAGGGGCCAACAGCTGCTGTAGTCTCTCCCTCTATCATGAAACAACCCCTATGT
TCTCTCCACTAATCTCTGCTCTCTTTGGGATGGGAAGCATGCCCAATCTGTCCATTTCATCAG
CCAATTGCCCTCCAGTTGCCACCTATAGCAACACCCCTTGTCTTCTGCTACTTCAGGGACCAAGTAT
TCTCTCCCTAATGATGCCCTGCTCCCTAGTGCCTTCTGTAGTACATCTCTATTACCAAAATG
GAAGTGGCAGTCTCATTCAAGCCTTATCCAATCTTATCTTCTTCAACATTGECTCATGCA
TCATCTTACAGCCTGATCATGGGAGGATTTGGTGGTGGCTAGTATCCAGAAAGGCCCAAGTCTC
TGATTGATTTAAGGATCTAGTAGCTCAACTTCTCAACTGCTTCCCTCTCAGGGAACTCACCT
AAGACAGGGACCTCAGAGTGGGCAGTTCTCAGCCTTCAAGATTAAGTAATCGGCAAAAA
TTTAATAGTCTAGACAAAGGCATGACGGGATACCTCTCAGGTTTTCAAGCTAGAAATGCCC
TTCTTCACTCAAACTCTCTCAAACTCAGCTAGCTACTATTGGACTCTGGCTGACATCGAT
GGTGACGGACAGTTGAAAGCTGAAGAAATTTATTTCTGGCGATGCCACCTCACTGACATGGCC
AAAGCTGGACAGCCACTACCAGTACGTTGCCCTGCCAGCTTGTCCCTCCATCTTTTCAGAG
GGGGAAGCAAGTTGATTTCTGTTAATCGAACTCTGCCCTCATATCAGAAACACAAAGAAAG
AAGAGCCTCAGAAAGAACTGCCAGTTACTTTTGAAGACAAACGGAAAGCCAACTATGAAC
GAGGAAACATGGAGCTGGAGAAAGCCAGCCCAAGTGTGATGGAGCCAGCAGAGGGAG
GCTGAACCGCAAGGCCAGAAAGAGAAAGGAAGAGTGGGACCGGAACACAGAGAGAACTGC
AAGACCAAGAAATGGAAGAAAGCAOCTGGAGTTGGAGAAACGCTTGGAGAAACAGAGAGAG
CTGGAGAGACAGCCGGAGCGAAGAGAGCGAAGAGGAGATAGAAAGACGAGAGGGCAGCAA
AACAGGAGCTTGACAGAGCAACGCGCTTACAAATGGGAAGAGCTCCGTCCGACAGGAGCTGC
TCAGTCAGAAAGACCCAGCGAAGCAAGACATTCTCAGCCTGAGCTCCAGAAAGAAAAAGT
CTCCACCTGCAACTGGAAGCACTGAAAGCAAAACATCAGCAGATCTCAGGCAGACTACAA
CATGTCCAAATCAGAAAGCAAAACAAAGAGCTGAGCTAGAAAGTTTGGATAAACAGTGT
GACCTGCAAAATATGGAATCAAAACAACCTTCAACAAAGAGCTTAAGGAATATCAAAATAAG
CTTATCTATCTGCTCCCTCAGAAAGCAGCTATTAAACCAAGAAATTAAAAAGATGCACTCA
GTAACACACCTGATTACGGCATCAGTTACTTCAATAAAAAATCATGAAAAGGGAAGAAAT
TATGCCAAAGAGCTTAAAGAACAAATAGATGCTCTTGA AAAAGAACTGCACTAAAGCTCT
CAGAAATGCAATTCACTTAACCAATCAGCTGAAGGAACTCAGAGAAAGCTATAATACACAGC
AGTTAGCCCTTGAAGCACTTCAATAAATCAAAAGCTGACAAATTGAAGGAAATCGAAAGAA
AAAGATTAGAGCAAAAAA

FIG. 2A

ATGCCAGTQACATTCACCATCATGGGAACCACTTCCCTTTTCTTCAGGATTCTCTGTAGTG
GAAGAGAGCACCCAGTGTGCGCTGAAAACATCTGAAAGTAGGGAGAAGAACCCTAAAAAT
AATCAGTATCTCAGAGGGCTCTAAGGTGCCAAGAAGTCTCACTGGACATTTAAGTGCCAA
CAAAGGCATACTTTCCGGAATCGCCAAAGTCAAAACTTTCTAACTTCTGTCTCTCTCAGAGAC
AAGTGAGACTCAAGAGTCTACTGCTTTAGTGGCAACTACAGAAAACTGGTGTTACCCAGA
AAAACAGGAGCAATTAGAAAATGGTTCCAATATTTCAAAGCTCCGCAACAGGATGTGCTT
TCCTTTGCCCATTTAGGGTTTCTCTCTTTTCTTTCTCTTTAATTAACCACTA

FIG. 2B

ATATCTAGAAGTCTGGAGTGAGCAAAACAAGAGCAAGAAACAAAAGGAAGCCAAAAGCAG
AAGGCTCCAAATATGAACAAGATAAATCTATCTTCAAAGACATATTAGAAGTTGGGAAAAT
AATTCATGTGAAGTACAGCAAGTGTGTTAAGAGTGATAAGTAAAAATGCACGTGGAGACAAG
TGCATCCCCAGATCTCAGGGACCTCCCCCTGCCTGTCACCTGGGGAGTGAGAGGACAGGAT
AGTGCAATGTTCTTTGTCCTGAAATTTTAGTTATATGTGCTGTAATGTTGCTCTGAGGAAGC
CCCTGGAAAAGTCTATCCCAACATATCCACATCTTATATTCACAAATTAAGCTGTAGTATG
TACCCTAAGACCGCTGCTAAATGACTGCCACTTCGCAACTCAGGGGGCGCTGCATTTTAGTA
ATGGGTCAAATGATTCACCTTTTATGATGCTTCCAAAGGTGCCCTTGGCTTCTCTTCCCACT
GACAAATGCCAAAGTTGAGAAAAATGATCAATAATTTAGCATAAACAGAGCAAGTCGGCGA
CACCGATTTTATAAATAAACTGAGCACCTTCTTTTAAACAAAACAAATGCCGGGTTTATTCT
CAGATGATGTTCAATCCGTGAATGGTCCAGGGAAGGAACCTTTCACCTTGACTATATGGCATT
ATGTCATCACAAGCTCTGAGGCTTCTCCTTTCCATCCTGCGTGACAGCTAAGACCTCAGT
TTCAATAGCATCTAGAGCAGTGCGGACTCAGCTGGGGTGATTTCCCCCCCCATCTCCGGGG
GAATGCTCTGAAGACAATTTTGTACCTCAATGAGGGAGTGAGGAGGATACAGTGCTACT
ACCAACTAGTGGATAAAAGGCCAGGGATGCTGCTCAACCTCCTACCATGTACAGGACGTCTC
CCATTACAACCTACCCAATCCGAAGTGTCAACTGTGTCAGGACTAAGAAAACCTGGTTTTG
AGTAGAAAAGGGCTGGAAAGAGGGGAGCCAAACAATCTGTCTGCTTCTCTCACATTAGTC
ATTGGCAAATAAGCATTCTGCTCTTTGGCTGCTGCTCAGCACAGAGAGCCAGAACTCTA
TCGGGCACCAGGATAACATCTCTCACTGAACAGAGTTGACAAGCCCTATGGGAAATGCCCT
GATGGGATTATCTTCAGCTTGTGAGCTTCTAAGTTCTTTCCCTTCATTCTACCTTCCAAG
CCAAGTTCTGTAAGAGAAAATGCCCTCAGTTCTAGCTCAGGTTTCTTACTCTGAATTTAGATC
TCCAGACCTTCTCTGCCACAAATTCAAATTAAGGCCAACAAACATATACCTTCCATGAAGCA
CACACAGACTTTTGAAGCAAGGACAATGACTGCTTGAATGAGGCCCTGAGGAATGAAG
CTTTGAAGGAAAAGAAATACTTTGTTCAGCCCTTCCACACTCTTCATGTGTTAACCAC
TGCTTCTCTGACCTTGGAGCCACGGTGACTGTATTACATGTGTTATAGAAAACCTGATTT
AGAGTTCTGATCGTTCAAGAGAAATGATTAAATATACATTTCTA

FIG. 2C

FIG. 3

TCGAGCGGGCGCCGGGOCAGGTCTTCAGACTGGACTGTGTCCACTGCCAGGCTTCCAG
GGCTCCAACTTGCAGACGGCCTGTTGTGGGACAGTCTCTGTAAATCGCGAAAGCAACCATG
GAAGACCTGGGGGAAAACACCATGGTTTTATCCACCTGAGATCTTTGAACAACTTCATCT
CTCAGCGTGGGAGGGAGGCTCTGGACTGGATATTTCTACCTCGGCCCGGACCACGCT

FIG. 4

TACCGYGGTGGCGGCCGAGGYCTGCTTYTCTGTCCAGCCCAAGGCCCTGTGGGGTCAGGGC
GGTGGGTGCAGATGCCATCCACTCCGGTGGCTTCCCCATCTTTCTGTGGCCTGAGCAAGGT
CAGCCTGCAGCCAGAGTACAGAGGGCCAACACTGGTGTCTTGAACAAGGGCCCTTAGCAG
GCCCTGAAGGRCCCTCTCTGTAGTGTGAACTTCCCTGGAGCCAGGCCACATGTTCTCCTCAT
ACCCGAGGYTAGYCATGGTGAAGTTGAGGGTGAAATAGTATTMANGRAGATGGCTGGCA
RACCTCCCCGGGCGGCCGCTCSAAATCC

FIG. 5

AGCGTGGTGCGCGGCCGAGGTGTCTTCAGGGTCTGCTTATGOCCTTGTTCAAGAACACCAG
TGYCAGCTCTCTGTACTCTGGTTGCAGACTGACCTTGCTCAGGCCTGAGAAGGATGGGGCA
GCCACCAGAGTGGATGCTGTCTGCACCCATCGTCTGACCCCAAAAGCCTGGACTGGACA
GAGAGCGGCTGTACTGGAAAGCTGAGCCAGCTGACCCACGGCATCACTGAGCTGGGCCCCCT
ACACCCCTGGACAGGGACAGTCTCTATGTCAATGGTTTCACCCATCGGAGCTCTGTACCCAC
CACCAGCACCGGGGTGCTCAGCGAGGAGCCATTCAACCTGCCCGGGCGGCCGCTCGA

FIG. 6

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A

TTGGGGNTTTMGAGCGGCCCGCCCGGGCAGGTACCGGGGTGGTACGGGAGGAGCCATTAC
ACTGAACCTTCACCATEACAACCTTGGGTATGAGGAGAACATGCAGCACCCCTGGCTCCAG
GAAGTTCAACACCACGGAGAGGGTCTTCAGGGCCTGCTCAGGTCCCTGTTCAAGAGCAC
CAGTGTGGCCCTCTGTACTCTGGCTGCAGACTGACTTTGCTCAGACTTGAGAAACATGGG
GCACCCACTGGAGTGGAGCCCATCTGCACCCCTCCGCCTTGATCCCACTGGTCTGGACTGG
ACAGAGAGCGGCTATACTGGGAGCTGAGCCAGTCTCTGGCGGNGACNCENCTT

B

AGCGTGGTGGCGGCCGAGGTCCAGTCCAGCATGCTCTTTCTCCTGCCCCACTGGCACAGTG
AGGAAGATCTCTGCTGTCAGTGAGAAGGCTGTATCCACTGAGATGGCAGTCAAAAAGTGC
ATTTAATACACCTAACGTATCGAATCATAGCTTGGCCCAAGTTATCTCATATGTGCTCA
GAACACTTACAATAGCCCTGCAGACTCTCCCGGGCGGCCGCTCGA

FIG. 7A and 7B

TGTGCTGTTGAACTTCCTGGAGNCAGGGTGACCCATGTCCTCCCCATACTGCAGGTTGGTG
ATGGTGAAGTTGAGGGTGAATGGTACCAGGACAGGGCCAGCAGCCATAATTGTSGRGCKG
SMOMSSGAGGMWGGWGTYYCWGAGGTTCYRARRTCCACTGTGGAGGTCCCAGGACTGCT
GGTGGTGGGGACAGAGSTCYGATGGGTGAAACCATTGACATAGAGACTGTTCTGTCCAG
GGTGTAGGGGGCCAGCTCTTYRATGYCATTGGYCAGTTKGCTYAGCTCCCAGTACAGCCRC
TCTCKGYYGMGWCCAGSGCTTTTGGGGTCAAGATGATGGATGCAGATGGCATCCACTCCA
GTGGCTGCTCCATCCTTCTCGGACCTGAGAGAGGTCACTCTGCAGCCAGAGTACAGAGGG
CCAACACTGGTGTTCCTTGAATA

FIG. 8

TCGAGCGGCGCGCGCGGCGGAGGTCAGGAAGCACATTGGTCTTAGAGCCACTGCCTCCTGGA
ITCCACCTGTGCTGCCGACATCTCCAGGGAGTGCGAGAAGGGAAGCAGGTCAAACCTGCTCA
GATCAGTCAGACTGGCTGTTCAGTTCTCACCTGAGCAAGGTCACTCTGCAGCCAGAGTA
CAGAGGGCCAACACTGGTGTTCCTTGAACAAGGGCTTGAGCAGACCTGCGAGAACCTCTTC
CGTGGTGTTGAACCTTCCTGGAAACCAGGGTGTTGCATGTTTTCTCATAATGCAAGGTTG
GTGATGG

FIG. 9

Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene	Gene</
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FIG. 10

Gene Name	Probe 1		Probe 2		Probe 1 Value	Probe 2 Value	Probe 1		Probe 2	
	Exp Name	Exp Name	Exp Name	Exp Name			O/B	AC	O/B	AC
42100181 (c)	16.8 385A Ovary T	16.8 385A Ovary T	16.8 385A Ovary T	16.8 385A Ovary T	26711	1424	101.3	54	2.0	54
42100181 (c)	11.5 523 Ovary Tumor	11.5 523 Ovary Tumor	11.5 523 Ovary Tumor	11.5 523 Ovary Tumor	13559	1179	65.3	68	3.9	68
42100181 (c)	11.1 448A Ovary T (tumor)	11.1 448A Ovary T (tumor)	11.1 448A Ovary T (tumor)	11.1 448A Ovary T (tumor)	14125	1273	62.3	61	5.6	61
42100181 (c)	10.8 205A Ovary T	10.8 205A Ovary T	10.8 205A Ovary T	10.8 205A Ovary T	16121	1488	91.1	41	2.3	41
42100181 (c)	6.1 361A Ovary Tumor	6.1 361A Ovary Tumor	6.1 361A Ovary Tumor	6.1 361A Ovary Tumor	11126	2235	58.2	68	4.1	68
42100181 (c)	14.6 185A Ovary T (tumor)	14.6 185A Ovary T (tumor)	14.6 185A Ovary T (tumor)	14.6 185A Ovary T (tumor)	6381	1434	23.5	40	2.1	40
42100181 (c)	11.4 361A Ovary Tumor	11.4 361A Ovary Tumor	11.4 361A Ovary Tumor	11.4 361A Ovary Tumor	9863	2235	40.9	64	1.6	64
42100181 (c)	11.4 495A Ovary T (tumor)	11.4 495A Ovary T (tumor)	11.4 495A Ovary T (tumor)	11.4 495A Ovary T (tumor)	2611	618	22.3	64	7.1	64
42100181 (c)	11.2 261A Ovary Tumor	11.2 261A Ovary Tumor	11.2 261A Ovary Tumor	11.2 261A Ovary Tumor	8271	1939	19.5	68	3.6	68
42100181 (c)	11.8 315 Ovary T (tumor)	11.8 315 Ovary T (tumor)	11.8 315 Ovary T (tumor)	11.8 315 Ovary T (tumor)	2281	687	11.6	60	2.1	60
42100181 (c)	12.5 265A Ovary Tumor	12.5 265A Ovary Tumor	12.5 265A Ovary Tumor	12.5 265A Ovary Tumor	1192	1291	19.2	68	4.0	68
42100181 (c)	12.1 312 Ovary Tumor	12.1 312 Ovary Tumor	12.1 312 Ovary Tumor	12.1 312 Ovary Tumor	305	1276	3.6	70	3.9	70
42100181 (c)	12.2 265A Ovary T	12.2 265A Ovary T	12.2 265A Ovary T	12.2 265A Ovary T	2741	1241	14.1	46	2.7	46
42100181 (c)	12.1 411 Ovary T (tumor)	12.1 411 Ovary T (tumor)	12.1 411 Ovary T (tumor)	12.1 411 Ovary T (tumor)	1234	817	8.4	56	2.1	56
42100181 (c)	11.9 985 1 Ovary T (tumor)	11.9 985 1 Ovary T (tumor)	11.9 985 1 Ovary T (tumor)	11.9 985 1 Ovary T (tumor)	6967	3726	41.5	70	9.2	70
42100181 (c)	11.6 185A Ovary T	11.6 185A Ovary T	11.6 185A Ovary T	11.6 185A Ovary T	2411	1471	6.2	50	1.9	50
42100181 (c)	11.6 265A Ovary Tumor	11.6 265A Ovary Tumor	11.6 265A Ovary Tumor	11.6 265A Ovary Tumor	1659	1054	9.7	69	2.9	69
42100181 (c)	11.4 265A Ovary Tumor	11.4 265A Ovary Tumor	11.4 265A Ovary Tumor	11.4 265A Ovary Tumor	818	1241	4.5	65	2.7	65
42100181 (c)	11.2 486A Ovary T	11.2 486A Ovary T	11.2 486A Ovary T	11.2 486A Ovary T	3171	2214	16.8	69	3.8	69
42100181 (c)	11.2 115A Ovary Tumor	11.2 115A Ovary Tumor	11.2 115A Ovary Tumor	11.2 115A Ovary Tumor	610	544	4.2	33	1.9	33
42100181 (c)	11.0 201A Ovary Tumor	11.0 201A Ovary Tumor	11.0 201A Ovary Tumor	11.0 201A Ovary Tumor	592	240	3.7	75	2.6	75
42100181 (c)	11.0 428A Ovary T (tumor)	11.0 428A Ovary T (tumor)	11.0 428A Ovary T (tumor)	11.0 428A Ovary T (tumor)	1197	1237	7.8	65	1.5	65
42100181 (c)	10.1A Ovary T (tumor)	10.1A Ovary T (tumor)	10.1A Ovary T (tumor)	10.1A Ovary T (tumor)	781	797	4.5	95	2.1	95
					1470	862	8.9	24	1.7	24

FIG. 11

FIG. 13

[illegible]

FIG. 14

11723.1.40.19.19

TACAAACTTTATTGAAACGGCACACGGCCACACACACAAACACCCCTGTGGATAGGGAAAA
 GCACCTGGCCACAGGGGTCCACTGAAACGGGGAGGGGATGGCAGCTTGTAAATGTGGCTTT
 GCCACAACCCCTTCTGACAGGGAAAGCCCTTAGATTGAGGCCCCACCTCCCATGGTGATGG
 GGAGCTCAGAAATGGGGTCCAGGGAGAAATTTGGTTAAGGGGGAGGTGCTAGGGAGGCATGA
 GCAGAGGGCACCCCTCCGAGTGGGGTCCCGAGGGCTGCAGAGTCTTCAGTACTGTCCCTCAC
 AGCAGCTGTCTCAAGGCTGGGTCCCTCAAAAGGGGCGTCCAGCCGGGGGCCCTCCCTGGCC
 AAACACTTGGTACCCCTGGCTGGCGAGCGGAAGCCAGCAGGACAGCAGTGGCGCCGATCA
 GCACAACAGACGCCCTGGCGGTAGGGACAGCAGGCCAGCCCTGTGGGTGTCTCGGCAG
 CAGGTCTGGTTATCATGGCAGAAAGTGTCTTCCCACTTCACGTCTTCACACCCACGTG
 AXGGCTACXGGCCAGGAAG

11724.1.40.19.19

CCCGTGGGTGCCATCCACGGAGTTGTTACCTGATCTTTGGAAGCAGGATCGCCCGTCTGCA
 CTGCACTGGAAAGCCCGTGGGCAGCAGTGTGGCCATCCCGCATGCCACGCCCTCTGGG
 AAGGGGCAGCAACTGGAACTCCCTGAGACCGTAAAGATGCAGGAGTGGCCCGCAGAGCA
 GTGGGCATCAACCTGGCAGCGGCCACCCAGATCCCTGCTCAGTGTGTGGGCCATTGTCTC
 AGAAGGGGACGGCAGCAGCTGTAGCTGCTCCCTCCGGGTCCAGGCACCAAGCCCTGCTGTTAAGGCCACCCAGC
 CAGAACTOACCATCTGGCCACGGCTTCCAGCCACCAAGCCCTGCTGTTAAGGCCACCCAGC
 TCACCAAGGCTCCACATGCTGTGCTGCTCCCACTCCCGGTCTTGGGCCCTGATGGTTT
 TACCTGCTGTGAGCTGCCCACTGGGAAGTATGGCTGCTGCCAATGCCCAACGCCACCTGCT
 GCTCCGATCAGCTGCACTGCTGCCCAAGCACACTGTGTGTGACCTGATCCAGAGTAAAGTGC
 CTCTCCAAGGAGAAAG

11730-1

GAATCACCTTTCTGCTTTAGCTACTTGTACAGAAACAATGAGGTTTCCACACAGCCGAG
 TCTCCCTGGGCTCTGTTTGGCTCTGGTAAGCCAGGCTACACCTTTCTCTCTCTATCG
 AGAGGGGAATATGCCATTAAAGGTGAAGAGTCACTTCCAAAAGTGAGAAAGGGATTGATT
 GCTGCTTCAGGACTGTGGAATTTTGGAACTGTTTACAAATGGTTGCTACAAAACAACA
 AAAAGGTAAATTACAAAATGTGTACATCACAAATGCTTTTAAAGACATTATGCAATTGTCT
 TCACATTCCTTAAATGTTGTTTCCAAAGGTGCTCAGCTCTAGCCCAAGCTGGATTCTCCCG
 GAAAGGGCAGACAGATTTCCCAAAAAGACACAGGGAAGGAGGGGCTGTTGAAAGGA
 GAAAGCAGGCTTCCAGTTAAAGATCAGGCTCAGTTAAAGGTGAGCTTCCCGCAXGCTGGC
 CTCAXGCGGAGTCTGGGTGAGAGGGAGGAGGAGCAAGGCTGGGACTGGGGCT

11730-2

AACCGGAGCCCGAGCAGTACCTGGCTGGGCACCATGGCTGGGATCACCACCATCGAGCCG
 GTGAAGCCCAAGATCCAGCTTCTGCAGCAGCAGGCAGATGATCCAGAGGAGCGAGCTGA
 GCCCTCCAGCCAGAAATTCAGCGGAGAAAGCCGCGCCCGGGAACAGGCTGAGCCCTGAGG
 TGGCTCTCTTGAACCGTAGGATCCAGCTGCTTGAAGAGAGCTGGACCGTCTCAAGGAGC
 GCTGGCCACTGCCCCGCAAAAAGCTGGAAAGAGCTGAAAAGCTGCTGATGAGAGTGAGA
 GAGGTATGAAGGTTATTCAAAAACCGCCCCCTTAAAGATGAAGAAAAGATGGAAGTCCAG
 GAAATCCAAGTCAAAAGAGCTAAGCAGATTCCAGAAAGAGGCAAGATAGGAACTATGAAGA
 GGTGGCTCTAAGCTTGGTATCAATTGAAGGAGACTTGGAAACGGACAGAGGAACGAGCTGA
 GCTGGCAGAGTCCCGTTCCCGAGAGATGGATGAGCAGATTAGACTGATGACCCAGAACCT
 GAAGTCTCTGAGTGC

FIG. 15C

11732.1contig

GAGAACTTGGCCCTTTATTGTGGGCCCAGGAGGGCACAAGGTCAGGAGGCCCAAGGGAGG
 GATCTGGTTTTCTGGATAGCCAGGTCA TAGCATGGGTATCACTAGGAATCCGCTGTAGCTG
 CACAGGCCTCACTTGTCTGCAGTTCCGGGGAGAAACACCTGCACTCCATGGCGTTGATGACCT
 CGTGGTACACGACAGAGCCATTGGTGCACTGCCAAGGGCACGCCCATGGGCTCCGTCCTCG
 AGGGCAGGCAGCAGGAGCATTGCTCTGCACATCTCGATGTCAATGGAGTACACAGCTT
 TGTGGCACACTTTCCCTGGCAGTAATGAATGTCCACTTCTCTTTGGGACTTACAACTCCOC
 ACTTTGATGTACTGCACCTTGGCTGTGATGTCTTTGCCATCAGGCTCCTCACATGTGTGACA
 GCAGGTGCCTGGAAATTTTACGATTTTGGCTCCTTCAGCCAGACACTTGTGTTCATCAAAATG
 GTGGGCAGCCCGTGACCCCTCTCTCCACAGATGTACTCTCCTCT

11732.2contig

GCCTGGACCTTGGCCGGATCAGTCCCACACACTGACTTGGTTGGCAAAATGGCCAGACCTTGC
 TGCAGAGTCATCGTGTCAATTGTGACCAATGGACCCCGGCTTCATGTGCCAACAGCCAGTC
 TCTGTTCGGGTGGAGGAGAGCTGTGGCTCCCGCTGGACCTGCCCTTGTGTGTGCACGGGGC
 AGTTCCACTCGGCACATCGTCACTTCCATGGGCAGAAATTCAGGCTTACTGCTAGCTGCT
 CCTATGTCACTTTCAAAAACAAGGACCCAGGACCTGGAAAGTGTCTCTCCACAATGGGGCCTG
 CAGCCCCCGGGCAAAACAAGCCTGCATCAAGTCCATTGAGATTAAAGCATGCTGGCGTCTC
 TGCTGAGCTGCACAGTAACATGGAGATGGCAAGTGGATGGGAGACTGGTCTTGGCCCGTA
 CTTGGTGAAAACATGGAAAGTCAGCATCTACCGCGCTATCATGTAAGAACTCAGGTTTACC
 CATCTTGGCCACATCCTCACAATACACCCGCKCAAAACAACGAGTT

11735-1-2

AGATCAACCTCTGCTGCTCAGGAGCAATGCCCTTCCCTTGTCTTGGATCTTTGCTTTGACCTTC
 TCGATAGTRWCAACTKXRYTFRAMSKHAAAGKGYRATGRWNITKSYWOWRASYNXWVWM
 RSGRARAYTTAGCAYCCCMCTCWZAGCGSAGKACCARGTCCAGAGGTGGACTCTTCTG
 GATGTTGTAGTCAAGACAGGCTCCCTCATCTTCCAGCTGTTTCCACCAAAAGATCAACCTC
 TCTGATCAGGACGGATGGCTTCTTATCTTGGATCTTTGCTTGCATTTCTGATFOGTCTC
 ACTGGGCTCCACCTCCAGGCTGATCTCTTACCAGTCAAGGCTCTTACGGAAGATYTGCATC
 CCACCTCTGACACCGACCGACGAGGTGCAGGCTGACTCTTTCTGGATGTTGTAGTCAGACA
 GCGTGCGYCCATCTTCCAGCTGCTTCCAGCAAGATCAACCTCTGCTGCTCAGGAGGRAT
 GCCTTCCCTTCTCTGATCTTTGCTTGAAGTCTCTCTATGCTCTCCTCGGCTCCACTTCCA
 GACTGATGCTCTTACCAGTCAAGGCTCTTACGGAAGATCTGCAATCCACCTCTAA

11740.2.contig

AACTCACAACACAGACAAGATTATTACAGCTCCAGCTATAATTAGAAAGCTGAACGAAGA
 GACAGAGCTCATGATTCTGAGATGATTGAGAGCTTAAAGCTCGAATTACATCTTTACAAG
 AGGAGGTGAAGCATCTCAACATAATCTCGAAAAAGTGGAAAGGAGCAAAAGAAAAAGGCT
 CAAGACATGCTTAATCACTCAGAAAGCGAAGAGATAATTAGACATAGATTTAAACTAC
 AAACCTTAAATCATTACAACAAGGGTTAGAACAAAGAGGTAATGAACACAAAGTAACCAAA
 GCTCGTTTAACTCACAACATGPAATCTATTGAAGAGGGCAAGCTCTGTGGCAATGTGTGAG
 ATGCAAAAAAAGCTGAAAGAGGAAGACAAECTCGAGAGAAAGCTGAAAAATCCGGTTGT
 TCAGATTGACAAACAGTGTTCATGCTACAGCTTGATCTGAAGCAATCTCAGCAGAACT
 AGAACAATTTGACTCGAAATAAAGAAAGGATGGAAGATCAAGTTAAGCAATCTA

FIG. 15D

11765.2&64.1.contig

CGCCTCCACCATGTCCATCAGGGTGACCCAGAAAGTCTACAAAGGTGTCCACCTCTGGCCCC
 CGGGCCTTCAACAGCCGCTCTACAGGAGTGGCCCCGGTTCCTGGCATEAGCTCCTCGAGCT
 TCTCCCGAGTGGGCGAGCAGCAACTTTCCGGGTGGCCTGGGCGCGCGCTATGGTGGGGCCA
 GCGGCATGGGAGGCATCACCAGTTACGGTCAACCAGAGCCTGCTGAGCCCCCTTGTCTCT
 GGAGGTGGACCCCAACATCCAGGGCGTGGCCACCCAGGAGGAAGGAACAGATCAAGACCTT
 CAACAACAAAGTTTGCCTCTTCAIAGACAAGGTACGGTTCCTGGAGCAGCAGACAAGAT
 GCTGGAGACCAAGTGGAGCCTCTCTCAGCAGCAGAGAAGACGGCTCGAAGCAACATGGAGA
 ACATGTTCCGAGAGCTACATCAACACCTTAGGGCGGAGCTGGAGACTCTGGGCCAGGAGA
 AGCTGAAGCTGGAGGGGAGCTTGGCAACATCCAGGGGCTGGTGGAGGACTTCAAGAAC
 AAGTATGAGGATGAGATCAATAAGCGTACAGAGATGGAGAACGAATTTGTCTCATCAAG
 AAGGATGTGGATGAAGCTTACATGAACAAGGTAGAGCTGGAGTCTCCCTGGAAAGGGCTG
 ACCGACGAGATCAACTTCTCAGGCAGCTGTATGAAGAGGAGATCCGGGAGCTGCAGTCC
 CAGATCTCGGACACATCTGTGTCTGTCTTCAAGCAACAGCCGCTCCCTGGACATGGACA
 GCATCATTTGCTGAGGTCAAGGCACAGTACGAGGATATTGCCAACCCGAGCCGGGCTGAGG
 CTGAGAGCATGTACCAGGTCAAGTATGAGGAGCTGCAGAGCCTGGCTGGGAAGCACGGGG
 ATGACCTGGGGCGCACAAAGACTGAGATCTCTGAGATGAACCCGGAACATCAGCCCGCT
 XCAGGCTGAGATTGAGGGGCTCAAAAGGCCAGAXGGCTTXCCTGGAXGXCCGCCAT

11765.2.contig

CCCGGAGCCAGCCAAAGGAGCGGAAATGGCAGACAAATTTTCCCTCCATGATGGCTTATCT
 GGGTCTGCAAAACCCAAACCTCAAGGATGGCCTGGCCATGGGGAACCAAGCTGTCTGG
 GCAGGGGGCTACCCAGGGGCTTCTATCTCTGGGGCTACCCCGGGCAGGCACCCCGAGG
 GCTTATCTCTGGACAGGCACCTCCAGGCCTTACCCTGGAGCAGCTGGAGCTTATCCCGGAG
 CAGCTGCACCTGGAGTCTACCCAGGGGACCCAGCGGCTGGGGCTAGCCATCTTCTGG
 ACAGCCAAAGTCCCACCGGAGCCTACCTCTCCCACTGGCCCTATGGCGCCCTCTCTGGGCA
 CTGATTTGTCTTATAAGCTGCTTGGCTGGGGAGTGGTGGCTCCGATGCTGATAACAA
 TTCTGGGACGGTGAAAGCCCAATCCAAACAGAAATTCCTTAGATTTCCAAAGAGGGGAATG
 ATGTTCCCTTCACTTTAACCCAGCTTCAATGAGAACAAACAGGACAGTCAATGCTTGC
 TACAAAGCTGCATAA

11768-1&2

GGCAATGCCAACAACTTTATTGAAGGAAAGTGCATGAAATTTGTTGAAACCTTAAAAAG
 GCAAACTTAGACACCCCGCTCRAAGCMAGKACCAAGTGCARAAGTGGACTCTTTCTGGAT
 GTTGTAGTCAGACAGGGTGGWCCATCTTCCAGCTGTTTYCCRGCAAGATCAACCTCTGC
 TGATCAGGAGGATGGCTTCTTATCTTGGATCTTTGGCTTGACATTCTCGATGGTGTCACT
 GGGCTCCACCTCGAGGGGTGAAGCTTACAGTCAGGGTCTTCAAGAAATYTGCATCCCA
 CCTCTGAGACGGAGCACCAGGTCCAGGGTCACTCTTCTGGATGTTGTAGTCAGACAGG
 GTGGGTCATCTTCCAGCTGCTTCCSAGCAAGATCAACCTCTGCTGGTCAGGAGGATGC
 CTTCCTTCTCTGATCTTTTCCTTGAATCTCTCAATGGTGTCACTGGCTCCACTTCCGAGA
 GTGATGCTCTTACCAGTCAGGGTCTTCAAGAGATCTGCATCCCACTCTAAGACGGAGCA
 CCAGGTGCAGGGTGGACTCTTTCTGATGTTGTAGTCAGACAGGGTGGCTCCATCTTCCA
 GCTGTTTCCAGCAAAAGATCAACCT

FIG. 15E

11768-1&2-11755-1&2

AGGTTGATCTTTGCTGGGAAACACCTGGAAAGATGGACCCACCTGTCTGACTACAAACATC
 CAGAAAAGAGTECACCTGCACCTGGTGGCTCCGTCTTAGAGGTGGGATCCAGATCTTCGTGA
 AGACCTGACTGGTAAGACCATCACTCTCGAAGTGGAGCCGAGTGACACCATTGAGAAYG
 TCAARGCAAAGATCCARGACAAGGAAGGCATYCCTCTGACCAGCAGAGCTTGATCTTTG
 CCGGAAAACAGCTGGAAAGATGGRCGCCACCTGTCTGACTACAAATCCAGAAAAGAGTCYA
 CCTGACCTGGTGTCTCCGTCTCAGAGGTGGGATGCCARATCTTCGTGAAGACCTGACTGG
 TAAGACCATCACCTCGAGGTGGAGCCCACTGACACCATEGAGAATGTCAAGGCCAAAGAT
 CCAAGATAAGGAAGGCATCCCTCTGATCAGCAGAGGTGATCTTTGCTGGGAAACAGCT
 GGAAGATGGACCCACCTGTCTGACTACAAATCCAGAAAAGAGTCCACCTTTCACACTGGT
 MCTBCGCTYAGAGGKGGGRYGGAACTCTWMTGWagCaCICCTKKYAAGRYYTCAMCMWt
 gAKKTCgAKYSCASTKWCCTWTCTRAKAAMGTYRWWGCAWagTCCMAGACAAGGAAGGC
 ATTCCTCTGACCAGCAGAGGTTGATCT

11769.1.contig

ATGGAGTCTCACTCTCTGCGACCAGGCTGGAGCCCTGTGGTGGGATATCGGCTCACTGCCAGT
 CTCCACTTCCCTGGGTTCAAGCGATCCTCTGCTCAGCCTCCCGAGTAGCTGGGACTACAG
 GCAAGCGTCACCATAATTTTGTATTTTGTAGTACAGACATGGTTTCCGCAATGTTGGCTGGG
 CTGCTCTCGAACTCTCTCAGCTCAAGTCTCTGCTCTGGCTCCCAAGTGTGGGATTACA
 GCGGAAAGCCAAAGCTCCCCCGCCAGCCAAACAACCTTTAGAATGAAGGAAATATGCAAAAG
 AACATCACATCAAGGATCAATTAATTACCATCTATTAATTACTATAATGTGGCTAATTATGA
 CTATTTCCCAAGCAATCTACCTGACTGCTTGAGAAGATGTTTGTCTCTGCAATGGTGGAGAG
 TGGAGAAGGCCCAGGATTCTTAAGCTT

11769.2.contig

AGCGCGGTCTTCCCGCCCGCAGAAACCTGAAGGTGATGTGGCCGCCCTCAACCGACCGCATC
 CAGCTCGTTGAGGAGCAGTTGCAACAGGCTCAAGAACGACTGGCCACGGCCCTGCAGAAAG
 CTGGAGGAGCCAGAAAACCTGCAAGATGAGATGTGAGAGAGGAATGAAGGTGATAGAAA
 CCGGCCCCATGAAGGATGAGGAGAAAGATGAGATTCAGGAGATGCAGCTCAAGAGGCCA
 AGCAGATTCCGGAGAGCCCTGACCCCAATACGAGGAGGTAAGTCTTAAGCTGCTCAATC
 TGGAGGGTGAGCTGGAGAGGCCAGAGGAGCCCTGCGGAGGTGTCTGAACTAAAATGTGCT
 GACCTGGAAGAAAGAACTCAAGAATCTTACTAACAACTCTGAAATCTCTGGAGCCTGCATCT
 GAAAAGTATTCTGAAAAGGAGGACAAATATGAAGAAAGAAATTAATTTCTGTCTGACAAA
 CTGAAGAGACCTGAGACCCCTGCTCAATTTCCAGAGAGAACCGTTCCAAAACCTGGAAAAG
 ACAATTGATGACCTGGAAGAGAACTTCCCCAGC

11770.1.contig

GTGCACAGCTCCCATTTATTTGAGAAATAAATAATTACAGTGAATAAGCTCTTCTT
 AAAATTACAAAACAGAAAACCAAAAGAGGAAGAGGAAAAACCCCAAGGACTTCCAAGGGT
 GAAGCTGTCCCTCTCTCTCTGCAACCTTCCAGGCTCATTAGTGTCTTGGAAAGGGGACAGA
 GGAATCAGAGGGGATCACTCTCCAGCCCGCCCTGGGCTCAAGCCGCTGAGGCAAGAGATCC
 TGAGGCCACAGAGCTCCGCAACTGAGCCGCTCTCTGCCCCCTCCCCCACTGCCCCA
 AACCTGTTTACAGACCTTCCCTCTCTCTCTCTAAACCCCTCCATCCACTCTGCACTTCCCA
 GGCAGGTGGGTGGGCCAGGCTCAGCTATACTCTCTGGGGCGGGTTTGGGTGACCAAGGC
 ACACTCCCAGAGGTGATATCAAGGCTT

FIG. 15F

11770.2.contig

GCAAGGAACTGGTCTGCTCACACTTGGCTTGGCCATCAGGACTGGCTTTATCTCCTGA
 CTCACGGGTGCAAAAGGTGCACTCTGCGAAGCTTAAGTCCGTCCCAAGCGCTTGGAAATCCTAC
 GGGGGGACAGCCGGATCCCCTCAGGCTTCCAGGTCTCTCAACTCCCGTGGACGGCTGAACAA
 TGGCCTCCATGGGGCTACAGCTAATGGGCATCCCGCTGGCCGTCTGGGGCTGGCTGGCCGT
 CATGCTGTGCTGGCCGCTGCCCATGTGGCGCGTGGACGGCTTCATCGGCAGCAACATTGTC
 ACCTGGCAGACCATCTGGGAGGGCCTATGGATGAACTGGCTGGTGGCAGAGCACCGGCCAG
 ATGCACTGCAAGGTGTACGACTGGCTGCTGGCACTGCCCGCAGGACCTGCAGGCGGGCCCG
 GCGCTGCTCATCATCA

11773.1.contig

TGCAAAAGGGACACAGGGGTTCAAAAATAAAAAATTCTCTTCCCGCTCCCCAAACCTGTAC
 CCCAGCTCCCCGACCACAACCCCCCTTCTCTCCCGGGGAAAGCAAGAAGGAGCAAGTGTG
 GCATCTGCAGCTGGGAAGAGAGAGAGCGCCGGGAGGGTGGCGAGCTGGTGTCTCTCTTTC
 CAAATATAAATACCTGTGTGCAAACTGGAAAATCTCCAGCACCCAGCACCCCAAGCACTCT
 CCGTTTTCTGCGGGTGTGTTGGAGAGGGGGGGGGGGGCAAGGGCCCGCAGCACCGGGCTGCT
 GCGGTCTACTGCATCCCGCTGGGTGTGCAACCCCGGAGCCTCTCTGCTCATTTGTAGAAQA
 GATGACACTCGGGGTGCCCCCGGATGGTCCCGGCTCCTGGATCAGCTTCCCGGTGTTGGG
 GTTCACACACCAGCACTCCCCAGCGTGGCGCTTCAGAGACATCTTGCACGTGTTGAGGTTG
 TACAGGCCATGCTTGTACAGTTC

11778.1.contig

GGGTGGAGGGAGCTGCTCTTTATTTCAAAAGACACTTGTCAATATTCAGTATCAAAACA
 GTTCACTATTGATTTCTCTTTCTCCCAATCCGCCCCAAAGAGAGCTACATAAAAGGAGAGT
 ACATTTTAAGGCAATAAGCTGCAGCATGTACACCTAACAGACCTCTAGAAACCTTACCAG
 AAAATGGGGACTGGGTAGGGAGGGAAACTTAAAGATCAACAACTGGCCAGCCCAACCGA
 CTGCAAGCCCTGTACAGCCAGATGGCGTGGCCAGCGTCCCAAAAGGCAAAAGCAAAAT
 TCAAAATAATAATAAAATTTAAAGGTTTGTACATAAGCTATTCAAGATTTCTCCAGCACT
 GACTGATACAAAGCAGATTGAGATGGCACTTCTAGAGACAGCAGCTTCAAAACCCAGAA
 AGCGTGATGAGATGAGTTTACATGGCTAAATCAAGTGGCAAAAACACAGTCTTTCTTTCTT
 CTTTCTTTTAAAGGAGCCAGGAAAGCAATTAAGTGGTCACTCAACATAAGGGGGCAGATGA
 TCCATTCTGTACCAGTTGTGAAGGGC

11778-2&30-1

CAQGAACCGGAGCCGCCAGCAGTACCTGGCTGGGACCAAGCGTGGGATCACCACCATCBA
 GCGGGTGAAAGCGCAAGATCCAGGTTCTGCAGCAGGAGGAGATGATGCAAGAGGAGGCGAG
 CTGAGCGCCCTCCAGCGAGAAATGAGCGAGAAAGCGCGCGCGGCAACAGGCTGAGCGT
 GAGGTGGCTCTCTGAAACCGTAGGATCCAGCTGGTTGAAAGAGAGCTGCAACCGTGTCTAG
 GAGCGCTGCGCACTGCGCTGCAAAAGCTGGAAGAACTGAAAAAGCTGCTGATGAGAGT
 GAGAGAGCTATGAACGTTATTGAAACCGCGGCTTAAACATGAAAGAAAGATGGAACT
 CCAGGAAATCCAACTCAAAAGAAAGCTAAGCACATTCCAGAAAGAGGCGAGATAGGAAGTATG
 AAGAGGTGGCTGCTAAGTTGGTGATCATGAAAGGAGCTTGGAAAGGACAGAGGAAAGGAG
 CTGAGCTGCGCAGAGTCCCGTGGCGAGAGATGGATGAGCAGATTACACTGATGGACCAGA
 ACCTGAAGCTGTCTGAGTTC

FIG. 15G

11782.1.contig

ATCTACGTCATCAATCAGGCTGGAGACACCATGTTCAATCGAGCTAAGCTGCTCAATATTG
 GCTTTCAAGAGGGCTTGAAGGACTATGATTACAACCTGCTTTGTGTTCACTGATGTGGACCT
 CATTCGGATGGACGACCGTAATGCCCTACAGGTGTTTTCCGAGCCACGGCACATTTCTGTT
 GCAATGGAGCAAGTTCCGGTTTAGCCTGCCATATGTTCACTATTTTGGAGGTGTCTCTGCTCT
 CAGTAAACAACAGTTTCTTCCCATCAATGGATTCCCTAATAATTATTGGGGTTGGGGAGGA
 GAAGATGACGACATTTTAAACAGATTAGTTTCATAAAGGCAATGCTATATCAGCTCCAAATG
 CTGTAGTAGGGAGGTGTGGAATGATCCGGCATTCAAGAGACAAGAAAATGAGCCCAATC
 CTCAGAGGTTTACCCGATCCGACATACAAAGGAAACGATCCGCTTCGATGGTTTGAAGT
 CACTTACCTACAAGGTGTTTGGATGTCAGAGATACCCGTTATATACCCAAATCAC

11782.2.contig

CTAGACCTCTAATTAAGGACACAATCATGCTGGAGAATGAACAGTCTGACCCCGAGGGC
 CACAGCGAATTTTACGGGAAGGAGGCAAGAGGTGAGAAGGGAAAGGAAAGGAAGG
 AAGGAGAAACAATAAGAACTGGAGACGTTGGGTGGGTGAGGAGTGTGGTGGAGGGCTGG
 AGAGATGGTAAACAAACCTGACTGCTATGAGTTTCAACCCCTATAGTCTAGGGCCATGAG
 GGCCTCAGTTCTTGGTGGCTGAGGGTCTTCCACCCAGCCACCTGGGGAGTGGAGTGG
 GGAGTTCTGCCAGGTAAAGCAGATGTTGTCTCCCAAGTTCTGACCCAGATGCTCTGCCAGGA
 TAACCGTGACCTGTTCCCTCAACAAGGGACCTGAAAGTAATTTTGTCTTTAC

11783-1 & 2

CCGAATTCAAGCGTCAACGATCCCTTACCATCAATCAATTCGCCACCAATGGTACT
 GAAGCTACGACTACACCGACTAGGGCGGACTAATCTTCAACTCTCTACATCTTCCCCCAT
 TATTCCCTAGAACCCAGGGGACCTGCGACTCCTTGACCTTGACAACTCGAGTACTACTCCCGAT
 TGAAGCCCCCATTCGTATAATAATTACATCACAAGACGCTCTTGCACTCATGAGGTGTCCCC
 ACATTAGCCTTAAAAACAGATGCCAATCCCGGACGTCTAAGCCAAACCACTTTACCGCTA
 CACGACCGGGGGTATACTACCGGTCAATGCTCTGAAATCTGTGAGGCAAAACCACAGTTTCAT
 GGGCATGGTCTTACAAATTAATCCCGTAAAAATCTTTGAAATAGGGCCCGTATTACCTA
 TAGCACCCCTCTACCCCTCTAG

11786.2.contig

GCTCTTACACTTTTATTGTTAATTCTCTTACATGGCCAGATACAGAGCTGTCTGTTGAAG
 ACCAGCACTGACCAGGAATGGCACTTTACAAAATCATCCCCCTTTTCATGATTGGAAC
 AGTTTCTTCAACCGTCTGGGAGCGTTCAAGCGTGACCAGCACATTTGCACATGCCAAAAA
 GGAGTGACCCCAAGCCCTCAACACACTTCCCAAGGCTCAGCAATGGGCTGCAGGTGACTT
 GCCAGGTTTGGCGTTCTGTAGCTTTCCTTCTGCTCCGCTGGGGAGGCCCTCAAGCACTGA
 GAGCCCGGGGTATGCTTTCATGAGTGTAAATTTACGGCACAAGGCCCATCATTAGGAT
 AAGCAACAGCCACAGCACTTCAATGCTTCTGAGGCTTACCTGTAGGAGCGGGTGAAGGAT
 TCCAGTTTATGAAAAATTAAGCAACAACCGTTTACCTGGGTGGGAAACAGGAAAC
 TGTGATGTGGGCCAATGACCACCAATTTTCTGCCCATGTGAAGCTCCCATGAAGC

FIG. 15H

11786.2.contig

CAAGCGCTTGGCGTTTGGACCCAGTTCAGTGAAGGTTCTTGGGTTTTGTGCTTTTGGGGATTT
 TGGTTTGACCCAGGGGTCAGCCTTAGGAAGGTCTTCAGGAGGAGGCCGAGTTTCCCTTCAG
 TACCACCCCTCTCTCCCCACTTTCCTCTCCCCGGCAACATCTCTGGGAATCAACAGCATATT
 GACACGTTGGAGCCGAGCCTGAACATGCCCTTCGCCCCAGCAGATGGAAAAACCCCTTC
 CTTCCTTAAGGTGTCTGAGTTTCTGGCTGTGTAGGCAATTTCCAGACTTGAAAATCTCATCAG
 TCCAATTGCTCTTGAGTCTTTGCAGAGAACCCTCAGATCAGGTGCACCTGGGAGAAAAGACTTT
 GTCCCCACTTACAGATCTATCTCTCTCTTGGGAAGGGCAGGCAATGGGGACGGTGTATGG
 AGGGGAAGGGAATCTCTCTGGCCCTTCATTGCCACACTTGGTGGGACCATGAACATCTTTAG
 TGTCTGAGCTTCTCAAATTACTGCAATAGGA

13691.1&1

AGCGTCAAATCAGAATGGAAAAAGACTCAAATCCATCATCAACACCAAGATCAAAAGGAC
 AAGRATCCTTCAAGAAACAGGAATAAACTCTTAAACACCAAAAGGACCTAGTTCTGTAG
 AAGACATTAAAGCAAAAATGCCAAGCAAGTATAGAAAAAGGTGGTTCTCTTCCCAAAGTGG
 AAGCCAAATTCAATTAATGTGAAGAAATTCCTTCCGATGACTGACCAAGAGGCTATTCA
 AGATCTCTGOCAGTGGAGGAAGTCTCTTAAAGAAAATAGTTTAAACAAATTTGTTAAAAAAT
 TTTCCCTCTTATTTCAATTTCTGTAAACAGTGTATCTGGCTGTCTTTTATAATGCCAGT
 GAGAACTTTCCCTACCGTGTGTGATAAATGTGTCTCAGGTTCTATTGCCAAGAAATGTGTGT
 CCAAAAATCCCTGTTTAGTTTAAAGATCGAACTCCACCCCTTGGCTTGGTTTAAAGTATGT
 TCGAATOTTAATGATAGGACATACTAGTACCGGTGGTCAGACATGGAAATGGTGGGSMGAC
 AAAAAATATACATGTGAATAA

13692.1&2

TCCGAATTCGAAGCCGAATTAATGACAAAGGATTCCTTTAGAGGATTACTTTTTTCAATTTG
 GTTTTAGTAATCTAGCGTTTGGCTGTATAAGCAATACAACCATGGATTTTAAATACTGTTTTG
 TCGAATGTGTAAAGCAATTAATCTAGAACCTTTGTATATTGATAGTATTTCTAACTTTG
 ATTCTTTAGTTTTCAGTTAAATGTTCAATCTCTGCTATGCCAATCGTTTATATGCCAGTTTC
 TTTAATTTTTTAGATTTTCTGATGTATAGTTTAAAGCAACAAAGTCTATTTTAAACTG
 TAGCACTAGTTTACACTTCTAGCAAGAGCAAGGTTGTGGGTTAAACTTTGTATTTTCTT
 TCTTATAGAGCCCTTCTAAAAAGGTATTTTATATGTCTTTTTTAAACAAATATTGTGTACAAC
 CTTTAAACATCAAATGTTTGGATCAAACAAGACCCAGCTTATTTTCTGC

13693.2

TGTGCTGGCCGGGCTGAGGTGGAGGCCAGGACTCTGACCCCTGCCCTTCAGCAA
 GGCCCCCGGACGGCGGGCTACTACCAACTCCCGTGGTTGAAAAATATAGGCCAGTAAA
 GCTCAATGAATTTGTGGCAATGAAGACACCTGAGCAGGCTAGAGGTCTTTTCAAGGGA
 AGGAAATGTGCCCAACATCATATTCGGGGGCTCCAGGAACGGGCAAGACCAACAGCAT
 TCTGTCTTGGCCCCGGGCTCTGCCCCCAGCACTCAAAGATGCCATGTTTGAAGTCAAT
 GCTTCAAATGACAGGGCCATTGACOTTGTGAGGAATAAAATTAATGTTTCTCAACAA
 AAGTCACTCTTCCCAAAGCCCGACATAAGATCATCATCTGGATGAAGCAGACAGCATC
 ACCGAGCGACCCCAAGCCCTTACGAGGAACCATGGAAATCTACTCTAAAACCACTCGT
 TCGCCCTTCTTGTAAATGCTTGGGATAAGATCATCGAGCC

FIG. 15I

13696.1-13744.1

CTTTSCAAAAGCTTTTATTTTCATGTCTGEGGCA TGGAAATCCACCTGCACATGGCATCTTAGCT
GTGAAGGAGAAAGCAGTGCACGAGAAGGAATGAGTGGGCGGAACCAACGGGCTCCACAA
GCTGCCCTCCAGCAGGCTGCCAAGGCCATGGCAGAGAGAGACTGCCAAACAAACACAAGCA
AACAGAGTCTCTTCACAGCTGGAGTCTGAAAAGCTCATAGTGGCATGTGTGAATCTGACAA
AATTAAAAAGTGTGCATAGTCCATTACATGCCATAAAACAETAATAATAATCTGTTTACAGG
TGACTGCAGCAGGCAGGTCCAGCTCCACCCTGCCCTCCTGCCACATCACATCAAGTGGCA
TGGTTTAGAGGGTTTTTTCATAATGTAATTCTTTTATTCTGTAAAAGGTAAACAAAATATACAG
AACAAAACCTTCCCTTTTTTAAACTAATGTTACAAATCTGTATTATCACTTGGATATAAAT
AGTATAAAGCTGATC

13700.1

CAAGGGATATAIGTTGAGGGTACRGRTGA²ACTGAACAGATCACAAAAGCAGGAGAAACA
TTAGTTCTCTCCCTCCCCAGCGTCTCCTTCCTCTCCCTGGTTTTCCGATGTCCACAGAGTGA
GATTGTCCCTAAGTAACTGCATGATCAGAGTGTCTGKCTTTATAAGACTCTTTCATTACAGCGT
ATCCAATTCAGCAATTGCTTCATCAAATGCCGTTTTTGGCAGGCTACAGGGCTTTTCAGGA
GAGTTTAGAATCTCATAGTAAAAGACTCAGAAAATTAGTGGCAAGCAAGACGAATTGGG
TGTGTAGGCTGCCATTNCTTTCTTACTAATTTCAAATGCTTCTGTAAAGCTCTCTGGAGTT
CGACACAAAGTGGTTTTGTTTGTGCTCCAGATGCCACTTCAGAAAAGATACCTAAAATAATCT
CTTTTCATTTCAAAGTACAAAC

13700.2

TCCGGAGCCGGGCTAGTCCGCGCGCGCGCGCGCGGGTGCAGCCACTGCAGGCACGGCTGCC
CGCGCTGAGTAGTGGGCTTAGCAAGCAAGAGGTCATCTCGCTCGGAGCTTGGCTCGGAA
GGGTCTTTGTTCCCTCCAGGCTTCCCAAGGGAATGACAATGGATAAAAAGTGAAGCTGGTACA
GAAAGCCAAACTCGCTGAGCAGGCTGAGCCATATGATGATATGGCTGCAGCCATGAAGGC
AGTCACAGAAACAGGGGCATGAACCTCTCCAGGAAGAGAGAAATCTGCTCTCTGTTGCTTA
CAAGAAATGTGCTAAGGCGCGCGCGCGCTCTTCTGCGCTGTGATCTCCAGCAATTGAGCAGA
AAAGAGAGAGGGAATGAGAAACAGCAGCAATCGGCAAAAGCTACCGTGAGAAACATAGA
GCCAGAACTGCAGGACATCTCCAAATGATGTTCTGACGCTTGTTGACAAATATCTTATTCC
AATGCTACACAACCGAGAAA

13701.1

AAAAAGCAGCAGTTCACACAAAAATAGAAATGTCAAATGTAGGATACAAACAAACCAA
GTGTGTGACCGCGGGAACCAACACCAAAAGGAAGCAATGACATCTTCCAAAAAGATGGA
GGAGGGTTCCCTCTGCTCTGCGGACTGACTCACAACACTGATGTGGCAGTATACACCATTC
CAGAGTCAGGGGTGTTCACTTTCTTCCGAGTAAOAAAAGCTGGGGATTAAACAAGAGCT
TTCTGAGGCTTAGGGACCAAGGCTGCTTTCTTCCCGCTCCCAACCCCTTGATCCCTTT
CTCTGATCAGCGGAAAGGAGCTCGAATGAGGAGCTAGAGTTGGAAGGGGAAAGGATT
CACTTGACAGAATGGGACAGACTCCTTCCA

FIG. 15J

13701.2

TGGCAATAGCACAGCCATCCAGGAGCTCTTCARGCCATCTCGGAGCAGTTCACTGCCATG
TTCCGCCGGAAAGGCTTCCCTCCACTGGTACACAGCCGAGGCCATGGACGAGATGGAGTTC
ACCGAGCGTGAGAGCAACATGAACGACCTCGTCTCTGAGTATCAAGCAGGTACCAGGAATCC
CACCCGAGAAGAGGAGGAGGAATTTCCGTGAGGAGGCCGAAGAGGAGCGCTAAAGGCAGAG
CCCCCATCAGCTCAGGCTTCTCAGTTCCCTTAGCCGTCTTACTCAACTGCCCTTCTCTCC
CTCAGAAATTTGTGTTTGCTGCCCTCTATCTTGTTTTTGTTTTTCTCTGGGGGGCTAGAA
CAGTGGCTGGCACATAGTAGGCGCTCAATAAATACTTGGTTONTGAATGTCTCCT

13702.2

AGCTGGCGCTAGGGCTCGGTTGTGAAATACAGCGTGTCTAGCCCTTGGCGCTCAGTGTAGAA
ACCCACGCGCTGTAAAGTTCGGTCTTCCGTCATCTGCTTTTCTGAAATACACTAAGAAGCAG
CCACAAAACGTGTAACCTCAAGGAAACCAATAAGCTGGAGTGCCTTAATTTTAAACAGTT
TCCAATAAAGCGTTTACTAGCT

13746.2-13740.2

GGAGATGAAGATGAAGCAAGCTGAGTCACTACGGGCGARGCGGGCAGCTGAAGATGATGA
GGATGACGATGTGGATACCAAGCAAGCAGAAAGACCGGACGAGGATGACTAGACAGCAAAAA
AGCAAAAAGTTAAA

13706.1

GATGAAATTAATACTTAATTAATCAAAAGCCACTACCATACCACCTAAAAGCTACTG
CCTCAOTGCCAGTAXGCTAAKGAACATCAAGCTACAGSACATYATCTAATATGAATGTTA
GCAATTACATAKCAAGAACCATGTTTCTTTCCAGAAAGACTATGGNACAAATGGTCATTWG
GGCCCAAGAGGATATTTGCCCGGAAAGCATCAAGATAGATNAAGGTAAAG

15706.2

GAGTAGCAACCCAAAGCGCTTGGTATTGAGTCTGTGGGSGACTTGGGTTCCGGTCTCTGCA
 GCAGCGGTGATCGCTTAGTGGAGTGGCTTAGCTAGTTGGCCAGGATGCCGAATATCAAAA
 TCTTCAGCAGCCAGCTCCCAACAGGACTTATCTCAAAAAATTCCTGACCCCGCTGGGCGCTGG
 AGCTAGGCAAGGTGCTGACTAAGAAATTCAGCAACCAAGGAGACCTGTGTGCAAAATTCGTG
 AAACTGTACCGTGGAGAGGATGTCTACATTCTTCAGAGTGGTGTGTGGCCAAATCAATGAC
 AATTAAATGGAGCTTTTGATCATGATTAATGGCTGCAAGATTGCTTCAGCCAGCCCGGTTA
 CTGCAGTCATCCCATGCTTCCCTTAGCCCCCGCAGGATAAGAAAGATNAGAGCCCGGGC
 GCCAATCTCAGCCAAGCTTGGTGCAAAATATGCTATCTGTAGCAOTGCAGATCATATTATCA
 CCAATGGACCTACATGCTTCTCAAAATTCANGGCTTTT

FIG. 15K

13707.3

ATGCCAAAAGGGGACACAGGGGGTTCAAAAATAAAAATTCTCTTCCCTCTCCCAAACT
GTACCCAGCTCCCCGACCACAACCCCTTCTCTCCCGGGGAAAGCAAGAAGGAGCAGG
TGTGGCATCTGCAGCTGGCAAGAGAGAGGCCCGGGAGGTGCCGAGCTCGGTCTGTCTC
TTTCCAAATATAAATACGTGTGTCAAGACTGGAAAACTCTCCAGCACCCACCACCAAGCA
CTCTCCCTTTCTGCGGTGTGTGGAGAGGGCGGNGGGCAGGGGGGCCAGGCACCGGCT
GGCTGCGGTCTACTGCATCCGCTCGGTGTGCACCCCGGA

13710.2

AGGTTGGAGAAGGTATGCAGGTGCAGATTGTCCAGGSKCAGCCACAGGOTCAAGCCCAA
CAGGCCCAGAGTGGCACTGGACAGACCATGCAGGTGATOCAGCAGATCATCACTAACACA
GGAGAGATCCAGCAGATCCCGGTGCAGCTGAATGCCGGCCAGCTGCAGTATATCCGCTTA
GCCCAGCTGTATCAGGCACTCAAGTTGTGCAGGGACAGATCCAGACACTTCCACCAAT
GCTCAACAGATTACACAGACAGAGGTCCAGCCAAGGACAGCAGCATTCAAGCCAGTTTAC
AAGATGGACAGCAGCTCTACCAGATCCAGCCAAGTCAACCATGCTTGGGGGCCANGACCTCG
CCAGCCCATGTTTCATCCAGTCAAGCCAACCAGCCCTTCAAGGGGACAGCCCCCAGGTGAC
CGGGCACTGAAGGGGCTGAGCTGCAAGGCCAANGACACCCAACACAATTTTTGCCATAC
AGCCCCCAGOCAATGGGACAGCCTTTCTTCCAGAGGAC

13710-1

TGAGATTTATTGCATTTTATGCCAGCTTCAAGTCCATGCCAAAGGROACTAOCACAGTTTGA
ATOCATTTAAAAATAAAAGCCAGCTGGGCAAGCAAAACACACAAGTCTAGTTTCTGGG
TCCCTGGGAGAAAACAGTGTGGCAATGAATCCACCCACTCTCCACAGCGAATAAATCTGT
CTCTTAATGCCAAAGCATGTTTCCATGGCTCTGGATGCCAAATACACAGAGCTCTGGGGTC
AGAOCAGGGATGGGACAGAGGACCAAGTGAAGCAAGCAGCTACACACATTACCTAAT
TCCATCTGAGGGCAAGAACACCTGGCAAGTCTTGGGGGTAGCAGCTGT

13711.1

TCCAGACATGCTCCTGTCTAGGCGGGGACCAGCAACCAGACCTGCTATGGGAAGCAGAA
AGAGTTAAGGGAAGGTTTCTTCAATCTCTCTCTCTCTTTTCTTTGAACAGTTTTTA
AATATACTAATAGCTAAGTCAATTCAGCCAGGTCCCGGTGAACAGTAGAGAACAAAGGA
GCTTGTAAAGAAATTAATTTTCTGTCTTCAACCCATTCAAACAGAGCTGCCCTGTTCCTG
ATCGAGTTCCATTCTGCCAGGGCACGGCTCAGTAACACCAAGCCATTCAAAGAAAGCGG
GTGTORAAATCACTGCCACCCCATGGACAGACCCCTCACTCTTCTTTAGCCGCAAGCGCT
ACTTAATAAATATAATTAATCTTGAATTAATGATAACCGAATTTCCCATGGGCAATCTA
AGGCCACTTGGCAGCTCTTAATCCGACAGTCAAGCACTGTGTGGACAAACAGATAAAGG
AAAAAAGAAAGAAAGAAAGCAACCCCACTTCTGT

FIG. 15L

13711.2

TGAGACGGACCACTGGCCTGGTCCCCCTCATKTGCTGTCTAGGACCTGACATGAAACCG
 AGATCTAGTGGCAGAGAGGAAGATGATGAGGAACCTTCTGAGACGTGGGCAGCTTCAAGAA
 GAGCAATTAATGAAGCTTAACTCAGGCCTGGGACACTTGATCTTGAAAGAAGAGATGGAG
 AAAGAGAGCCGGGAAAGGTCATCTCTGTTAGCCAGTCGCTACGATTCTCCCATCAACTCAG
 CTTACATATTCATCATCTATAAACTGCATCTCTCCCTGGCTATGGAAGAAATGGGCTTCA
 CCGGCTGTCTTCTACCGACTTCGCTCAGTATAACAGCTATGGGGATGTACCGGGGGAGTG
 CGAGATTACCAGACACTTCCAGATGGCCACATGCCCTGCAATGAGAATGGACCGAGGAGTG
 TCTATGCCCAACATGTTGGAAACCAAGATATTTCCATATGAAATGCTCATGGTGACCAACA
 GAGGGCGCGAAACCAATCTCAGAGAGGTGGACAGAA

13713.1&2

TCACTTTATTTTCTTTGTATAAAAACCCATGTTGTAGCCACAGCTGGAGCCTGAGTCCGCT
 GCACGGAGACTCTGGTGTGGGTCTTGACGAAGTGGTCAGTGAACCTCCTGATAGGGAGACT
 TGGTGAATACAGTCTCTCTCCAGAGGTGGGGGCTCAGGTAOCTGTAGGTCTTAGAAATGGC
 ATCAAAGGTGGCCTTGGCGAAGTTGCCCAAGGCTGGCAGTGCAGCCCGGGCTGAGGTGTA
 GCAGTCATCGATACCAOCCATCATGAG

13715.4

CTGGAATATAGACCCGCTGATCGACAAAACCTTGAACGAGGCTGACTGTGCCACCGTCCCGC
 CAGCCATTCGCTCTACTGATGACACAAAGATGTGGTCAATGACAGAAATCAOCTTTGTAAAT
 ATGTATAATAGCTCATGCAATGTGTCCATGTCAATAACTGTCTTCATACCCCTTCTGACTCTGG
 GGAAGAACGAGTACATTGAAGCGAGATTGCCACCTAGTGGCTGGGAGCTTCCCAGGAACC
 CAGTCCCCAGGGAGCCGTGGCACTTACCTTTGTCCCTTGTCTTCATTCTTGTGAGATGATAAA
 ACTGGGCACAGCTCTTAAATAAAATATAAAATGAACA

13717.1&2

TGAATGGGGACGAGCTGACCCAGCAAAATGGAGCTTGGGAGACCAGGCCCTGCAGGGGAT
 GGAACCTTCCAGAAAGTGGGCATCTGTGCTGGTGGCTCTTGGGAAGGAGGAGAAATACACA
 TGCCATGTGGAACATGAGGGGCTGGCTGAGGCTCTACCCCTGAGATGGGCCAGGAAGGAG
 CCTCTTCATCCACCAAGACTAACACAGTAATCATTCCTGTCTCCGCTTGTCTTGGAGCTGT
 GGTCACTCTTGAAGCTGTGATGGCTTTTGTGATGAAGAGGAGGAGAAACACAGGTGGAAA
 AGGAGGGGACTATGCTGTGCTCCAGCCTCCCAAGCTCTGATATGTCTCTCCAGATTGT
 AAAGTGTGAAGACAGCTGCCCTGGTGTGGACTTGGTGACAGACAATGTCTTCACACATCTCC
 TGTGACATCCAGAGACCTCAGTCTCTTACTCAAGTGTCTGATGTTCCTGTGAGTCTCCG
 GCTCAAGTGAAGAACTGTGGAGCCCACTCCAGCCCTGCACACCAGGACCCTATCCCTG
 CACTGCCCTGTCTTCCCTTCCAGGCCAAGCTTGGCTGCCAGCCAAACATTGGTGACAT
 CTGCAGCCTGTGAGCTCCAATGCTACCTGACCTTCAACTCCTCACTTCCAGACTGAGAAAT
 ATAAATTTGAAATGTGGGTGGCTGGAGAGATGGCTCAGCGCTGAGTGTCTTCCAAAGCTCT
 GAGTTCAAATCCAGCAACCAATGGTGGCTCAACCATCTGTAAATGGGATCTAATACCC
 TCTTCTGCACTGTCTGAACACASCTACAGTGTACTTACATATAATAATAAATAAG

FIG. 15M

13723.2

GATGTGTTGGACCCCTCTGTGTC.AAAAAAACCCTCACAAGAATCCCTGCTCATTACAGAA
GAAGATGCCATTAATAATATGGGTTATTTTCAACTTTTATCTGAGGACAAGTATCCATTAA
TTATTGTGTCAGAAAGAGATTGAATACCTGCTTAAGAAGCTTACAGAAAGCTATGGGAGGAG
GTTGGCAGCAAGAACAAATTTGAACATTATAAAATCAACTTTGATGACAGTAAAAATGGCC
TTCTGTCATGGGAACCTTATTGAGCTTAATGGAATGACAGTTTAGCAAAGGCATGGACCG
GCAGACTGTGTCTATGGCAAATTAATGAAGTCTTAATGAAGTTATATTAGATGTOTTAAG
CAGGGTTACATGATGAAAAAGGGCCACAGACGGAAAAACTGGACTGAAAGATGGTTTGT
CTAAAACCCCAACATAATTTCTTACTATGTGAGTGAGGATCTGAAGGATAAGAAAGGAGAC
ATTCTCTTGGATGAAAAATGCTGTGTAGAAAGTCCCTGGCTGACAAAAGATGGAAAGAAAT
GCCTTTT

13725.1

GACTGGTTCTTTATTTCAAAAAGACACTTGTCAATATTCAGTRTCAAAACAGTTGCACTATT
GATTTCTCTTTCTCCCAATCGGCCCAAAAGAGACCACATAAAAAGGAGGTACATTTTAAGC
CAATAAGCTGCCAGGTGTACACCTAACAGACCTCTAGAAACCTTACCAGAAAAATGGGGA
CTGGGTAGGGAAGGAACTTAAAGATCAACAACTGCCAGCCCAAGGACTGCAGAGGCT
GTCACAGCCAGATGGGGTGGGAGGGTGGCAGAACCCAAAGCAAAGTTTCAAAATAATA
TAAATTTAAAAAGTTTGTACATAAGCTATTCAGATTTCTCCAGCACTGACTGATACAA
AGCACAATTGAGATGCCACTTGTAGAGACAGCAGCTTCAAAGCCAGAAAAGGGTGATGAG
ATCAAGTTTCAATGCTTAAATCAATGGC.AAAAACACAGTCTTCTTTCTTTCTTTCAA
GANGCAGGAAAACCAATTAAGTGGTCACTTAACATAAGCGCGAC

13725.2

TGGGTGGGACCATGCGTGGCATCACCACCAATGGAGCGCGGTGAACCGCAAGATCCAGGTT
CTGCACGAGCAGGCAGATGATGACAGCGAGCGAGCTGAGCGGCTCCAGCGAGAAAGTTGA
GGGAGAAAGCGCGCGCGCGGAAACAGGCTGAGGCTGAGGTGGCGCTCTTGAACCGTAGGA
TCCAGCTGGTTGAACAACAGCTGACCTGCTCAGGAGCGCGCTGGCCACTGCCCTGCAL
AGCTGGAAGAGCTG.AAAAGCTCTGTATGAGAGTCAAGAGAGGTATGAAGGTTATTGAA
AAGCGCGCTTAAAAAGATGAAGAAAGATGGAACTCCAAGAAATCCAAGTCAAAAGAGC
TAAGCACATTGACAGAGAGGAGATGGAAAGTATGAAGAGGTGGCTCTGAAGTTGGTGT
CATGAAAGGAGACTTGAAGCGGACAGAAAGCAAGCAGCTTGAGCTTGGCAAAAGTCCCGT
TGCCACAGATGGGATGAACAGATTAGACTGATGGAACCAAAAC

13726.1&2

AGGCGCNGCGCGCTGCGTGGGCACTGGGTGACCGACTTAGCCCTGGCCAGACTCTCAGCAC
CTGGAAAGCGCGCGCGAGAGTGCAGCGCTGAGGCTGGGAGCGAGGACTTGGCTTCAAGCTTGT
TAAACTCTGCTGTGAGCCCTCTTCTGCGCTGCAATTAAGATGCGCTCCCGCAAAAGAAAGGCTG
CGAGAAGAAAGAGCGCGCTTCTGCAATCAACGAAGTGGTAACCGAGAAATACACCATCAA
CATTCACAAGCGCATCCATGAGTGGCTTCAAGAAAGCTGCACTTGGGCACTCAAAAG
GATTCGGAATTTGGCATGAAGGATGGAACTTCAAGATGTCGCAATTGACAGCAAGGCT
CAACAAGCTGTCTGGCCCAAGCAATTAAGGAATGTGGCATACCGAATTCGGGTGTGGCG
TGTCCAGAAAGCTAATGAGGATGAAGATTCAACCAATTAAGCTATAACTTTGGTTAECTA
TGTACCTGTTACCACTTTCAAAATCTACAGACAGTCAATGTGGATGAGAACTAATCGCTG
ATCGTCAGATCAAAATAAGTTATAAAAT

FIG. 150

13727.1

TGGGGAGCCACACTTGGCCCTCTTCTCTCCAAAGGCCAGAACCTCCTTCTCTTTGGAGAA
 TGGGGAGGCCCTTTGGAGACACAGAGGGTTTACCTTGGATGACCTCTAGAGAAATTGCC
 CAAGAAGCCCCACCTTCTGGTCCCAACCTGCAGACCCCCACAGCACTCAGTTGGTCAGGCCCT
 GCTGTAGAAGGTCACTTGGCTCCATTGCCCTGCTTCCAACCAATGGGCAGGAGAGAAAGGCC
 TTTATTTCTCGCCCAACCAATTCCTCTCTGTACCAGCACCTCCGTTTTTCAGTCAGTGTGTGTTCCA
 GCAACGGTACCGTTTACACAGTCACCTCAGACACACCAATTCACCTCCCTTGGCCAAGCTGT
 TAGCCTTAGAGTGATTGCACTGAACACTGTTTACACACCCGTGAATCCATTCCCATCAGTCC
 ATTCCAGTTGGCACCCAGCCTGAACCAATTTGGTACCTGGTGTAACTGGAGTCCCTGTTTACA
 AGGTGGAGTCCGGGCTTGGTGACTTCTCTTCAATTTGAGGGCAC

13727.2

ACCTAGACAGAAAGGTGGGTGAGGGAGGACTGGTAGGAGGCTGAGGCCAATTCCTTGGTAGT
 TTGTCTGAAACCCTACTGGAGAAAGTCAGCATGAGGCACCTACTGAGAGAAAGTGGCCAGA
 AACTGCTGACTGCATCTGTAAAGAGTTAACAGTAAAGAGGTAGAAGTGTGTTTCTGAATCA
 GAGTGAAGCGTCTCAAGGGTCCACAGTGGAGGTCCCTGAGCTACCTCCCTTCCGTGAGT
 GGGAAAGAGTGAAGCCCAAGAGAGTGAAGCAAGGATGGGCTTCTGGGCTCCA
 GGCAAGCGCTGTGCTCTGTCCAGCAGGGAGCCCAAGGAGTCAGAAAGAAAGAACTAATCA
 TTTGTTGCAAGAAACCTTGGCCCGATACTAGCGGAAAGTGGAGCGCGNGGTGGGGGCAC
 AGGAAAGTGGAAAGTGAATTTGATGACAGGACAGAGAAACCTATGCCACAGTGGCCGAGTCCAC
 TTCTAAAGTG

13729.1&2

TTCAAGCAATTTGAACAAGTATATGTAGATTAGAGTGAAGCAAAATCATATACAATTTTCAT
 TTCAAGTTGCTATTTTCCAAATTTGTTCTGTAATGTCTTAAATTAATTAATAAATTAACAAA
 GCCAAAAATTAATTTATGACAAAGCAAGCCATCCCTACATTAATCTTACTTTTCCACTCAC
 CGGCCCATCTCTCTCTCTTTTCTTACTATCCCAATTAAGCTTTCTACTGGGCCGGGGCG
 TGTGCTCATGCTGTAAATCCAGCAATTTGGGAGGCCAAGGCCAGGCGGATCATGAGGTC
 AAGAGATTGAGACCATCTTGGGCAACATGGTGAACCCCGCTCGACTAAGAATACAAA
 ATTAGCTGGGCAATGCTGGGCAATGCTGTAGTCTCACTACTCGGAGGCTGAGGCCAGAA
 CAATGCTTGAACCCCGGAGGCAAGCAATCCATGAGGCCCGGATCGGGCCACTGCACTCT
 AGCCTGGGCCGACAGACTGAGACTCTCTCT

13731.1&2

TGTCCCACTCTAAAGCCCTATCAGCAGGCACTCTTACCAACAGATCGGGTCCCTGTTC
 AGCCCAACCCCATGAGCCCGGAGCAGCATATCTCTCCCAATCAGGCCCAAGTCCCCACAGCT
 ACAAGGCCAGCAGATCCCTAATCTCTCTCTCAATCAAGTCCGCTCTCCCCAGCCTGTCCCTT
 CTCCACCGCCACAGTCCCGAGCCCGCCCACTCTAGTCTCTCCCCAAGGATGCAGCCTCAGCC
 TTCTCCACAGCACGTTTCCCGACAGACAAGTCCCGACAATCTGGACTGGTAGTTGCCAG
 GCCAACCCCATGGAACAAGGGCAATTTGCCAGCC

FIG. 15P

14347.1

CAGATTTTATTTGCAGTGGTCACTGGGGCCGTTTCTTGCTGCTTATTTGTCTGCTAGCCTG
 CTCTTCCAGCTGCATGGCCAGGCCCAAGGCTTGATGACATCTCCAGGCTGAGAAATGC
 TTGGCTTGCTGGCCAGAGCAGATTCCGCTTTGTTCACAAAGGTCTCCAGGTCATAGTCTG
 GCTGCTGGTTCATCTCAGAGAGCTCAAGCCAGTCTGGTCTCTGCTGTATGATCTCCTTGAG
 CTCTTCCATAGCCTTCTCTCCAGCTCCCTGATCTGAGTCACTGCTTCTGTTAAAGCTGGACA
 TCTGGGAAGACAGTTCTCTCTCTCTTGGATAAAATTGCCCTGGAATCAGCGCCCGCTTAGA
 GCAGGCTTCCATCTCTCTCTGTTTCCATTTGAATCAACTGCTCTCCACTGGGCCCCACTGTGGG
 GGCTCAGCTCCTTGACCCTGCTGCATATCTTAAAGGTGTTAAAGGATATTCACAGCAGCT
 TATGCTGCT

14347.2

CTCTCTTGCTACATGAACCCCAAGTTGAAAGTGGACTTAACAAAGTATCTGGAGAACCAA
 GCAATCTGCTTTGACTTTGCATTTGATGAAACAGCTTCGAATGAAGTTGTCTACAGGTTTCA
 AGCAAGGCCACTGGTACAGACAATCTTTGAAGGTGGAAAACCAACTTGTCTTTCATATGG
 CCAGACAGGAAGTGGCAAGACACATACTATGGGGGGAGACCTCTCTGGGAAAGCCCCAGAA
 TGCATCCAAAGGGATCTATGCCATGGCCTTCCGGGAGCTCTCTCTGAAAGATCAACCCCT
 GCTACCGGAAGTTGGGCTGGAAAGTCTATGTGACATCTCTGGAGATCTACAATGGGAAGCT
 GTTTGACCTGCTCAACAAGAAAGGCAAGCTTGGCGCTGCTGGAAGACCGGCAACCAACAGG
 TCCAAGTGGTGGGGGCTTGCAGGAACATCTGNTAACTCTGCTTGATGATGCCANTCAAG
 ATGATCGACATGGCCAGCCCTGCA

14348.2&14350.1&2

TCCCGAATTCAGCCGACAAATTGGAAGTGAATGGAAGATGGCTATCATGAACATCAGG
 CAAATCTTTTCCGCAAGATCTGATGAGACGACAGGAAGAATTAAGACCGCATGGGAAGAAC
 TTCACAATCAAGAAATCCAGAAACCTTAAAGCAATGCAATTCAGGCAAGAGGAGGAACGA
 COTAGAACAGAGGAAGCAGATCACTAATCTCTCAAGCTGAGATGGAAGAACAAATGAGGCG
 CCAAGAGAGAGGAAGTTACAGCCCAATGGCTTACATGGAATCCACCGGAAAGAGACATGC
 GAATGGGTCCCGGAGGAGCAATGAACATGGGAGATCCCTATGCTTCAGGAGGCCAGAAA
 TTTCCACCTCTAGGAGGCTGCTGGTGGCATACGTTATGAAGCTAATCCTGGCGTTCCACCAG
 CAACCATGACTGGTTCATGATGGGAAGTGCATGGCTACTGAGCGCTTTGGCCAGGGAG
 GTCCGGGGCTGTGGGTGGACAGGGTCTAGAGGAATGGCGCTGGAACTCCAGCAGGAT
 ATGCTAGAGGGAGAGAAAGATACCAAGGC

14349.1&2

TTGCTGAAGACCTTCACTGCTAAGACCATCACTCTCGAAGTGGAGCCCGAGTGCACAGCAT
 CAGAAATGCAAGGCAAGATCCAAAGACAAGCAAGGCCATCCCTGCTGACCAGCAKAGGTTG
 ATCTTTGCTGGGAAACAGCTGCAAGATGGAGCCAGCCTGTCTGACTACAACATCCAGAAA
 GAGTCCACCCCTGCACCTGCTGCTCTCTCTCAGAGCTGGCATGCAAAATCTTCTGTGAAGACCC
 TGACTGGTAAGACCATCACCTCGAGGTGGAGCCCAATGACACCATCOAGAAATGCAAGG
 CAAGATCCAAAGATAAAGCAAGCCATCCCTCTGATGACAGAGGTTGATCTTTGCTGGGA
 AACAGCTGGAAGATGGACCCAGCCTGTCTGACTACAACATCCAGAAACAGTCCACTCTGC
 ACTTGGTCTCTGGCTTGAAGCGGGCTGTCTAAGTTTCCCTTTTAAAGTTTCAACAAATTTT
 ATTGCACTTTCTTTCAATAAAGTGTTCATTC

FIG. 15R

14352.1 &

CGCGGGGTGCGTGCGCCACTGGGTGACCGACTTAGCCTGGCCAGACTCTCAGGCACCTGGA
AGCGCCCCGAGAGTGACAGCGTGAGGCTGGGAGGGAGGACTTGCGCTTGAGCTTGTTAAAC
TCTGCTCTGAGCCTCCTTGTCGCTGCAATTAGATGGCTCCCGCAAGAAGGGTGGCGAGA
AGAAAAAGGGCGGTCTGCGCATCAGCGAAGTGTAACCCGAGAATACACCATCAACATT
ACAAGCGCATCCATGGAGTGCGCTTCAAGAAAGCGTGACCTCGGGCAGCTCAAGAGATT
GGAAATTTGCCATGAAGGAGATGGGAAGCTCCAGATGTGGCGATTGACACCAAGCTCAACA
AAGCTGTCTGGGCGAAAGGAATAAGGAATGTGCCATACCGAATCCGTGTGCGGCTGTCCA
GAAACGTAATGAGGATGAAGATTCACCAATAAGCTATAACTTTGGTTACCTATGTACC
TGTTACCACTTTCAAAAATCTACAGACAGTCAATGTGGATGAGAACTAATCGCTGATCGT

14331

AAATCTTTATTTAAATCAACAAGCTCATCTCTCAAGCCCCAGACCATGGTAGGCAGCC
TCCCTCTCCATCCCTCACCCCACCCCTTAGCCACAGTGAAAGGAATGGAAATGAGAAGC
CAGGAGGCCCTGCCAGGGAAGGCTGCCCCAGATGTGTGGTAGCACAGTCAGTGCAGC
TGTGCTGGGGCAGCAGCTGCCACAGGCTCTTCCCTATAAATTAACTTCTGCAGCCACAG
CTGTGGGAGAAGCATACTTTGTAGAAGCAAGGCCAGTCCAGCATCAGAAGGCCAGAGGCAG
CATCAGTGACTGCCAGCCATGGAATGAAAGGAGGACACAGAGCTCAGAGACAGAACAGG
CCAGGGGGAAGAAAGAGAGACAGAAATAGGCCAGGCCATGCCGGTCAGGGA

143552

TGATGAATCTGGGTGGGCTGGGAGTAGCCCGAGATGATGGGCTCTTCTCTGGGGATCCCA
 CTGGTTCCCTAAGAAATCCAAAGGAGAATCCCTGGCAACTTCTCGGATAACCAAGCTGCAAGA
 GGGCAAGAACCTGATCCGCTTACAGATGGGCAACCAACCCCGGGCGCTCTCANGCAGGCAT
 GACTGGCTACGGGATCCCAACCCAGATCTCTGATCCCAACCCAGGCTTCTCCCTTCCCT
 CCCACCAATGGTTAATATATATATATATATTTAOCAGTGACATTCACAGAGAGAGCC
 CAGAGCTCTCAAGCTCTCTTCTCTCAGGCTGGGGGCTCAACCCCTGTCTGTCACTCTGA
 AGTCCCTCTGGCATCTCTCTCCCACTCTTACTAATACATTCGCTTCCCAATGCC

17182-142

AGCGGAGCTCCCTCGCCTGGTGGCTAC.AACCCACACACGGCAGGGTCAGGCA TCGAGGCA
AACTCCAGCGACTGGGTAAACCACCTCACATTTCAGGTGAAGGTGCGGGACACCTACCTGGAT
ACACAGGTGGTGGGACAGACAGGTGTCATCCGGAGTGTACCGGGGGCATGTGCTCTGTG
TACCTGAAGCAGAGTGAGAAGGTGTCTCAGCATTTCCAGTGAAGCACTGGAGCCTATCACC
CCGACCAAGAACAAAGAGGTGAAGGTGATCTCGGGGAGGATCGGGAAGCCACGGGGCT
CTACTGAGCATTCGATGGGAGCAATGCCATTTCTCGTATGCACTTGA TGAGCAGCTCAAG
ATCCTCAACCTCGCCTTCTGGGGAAGCTCTGGAAGCTGAAGCAAGCAGGAGGGCCGTGG
ACTTCGTGGGATGAAGAGTGAATCTCTCTCTCTCTCTGGCCCTTGGCTGTGACACAGA TC
CTCCTCCAGGGCTAGGGGGCAATTTCTCTGCAATTTCTTTTGTTTTCTCTTTAGGTTTCCATCT
TTTCCCTCCCTGGTGCTCAATGGAATCTCAAGTAGAGTCTCGGGGAGGGTCCCCACCTTCT
GTACCTCTCGCCACAGCTTCTTTTGTGTACGGTCTTTCAATATAAAGAAGCTGTTTGT
CTA

FIG. 155

17183.2

GGTTCACAGCACTGCTGCTTGTGTGTGTGCCGGCCAGGAATTCAGGCTCACAAGGCTATCT
 TACCAGCTCGTTCTCCGGTTTTAGTGCCATGTTTGAACATGAAATGGAGGAGAGCAAAAA
 GAATCGAGTTTGAATCAATGATGTGGAGCCTGAAGTTTTTAAGGAAATGATGTGCTTCATT
 TACACGGGGGAAGGCTCCAAACCTCGACAAAAATGGCTGATGATTTGCTGGCAGCTGCTGAC
 AAGTATGCCCTCGAGCGCTTAAAGGTCATGTGTGAGGATGCCCTCTGCAGTAACCTGTCCG
 TGGAGAAGGCTGCAGAAATTCTCATCTGGCCGACCTCCACAGTGCCAGATCAGTTGAAAA
 CTCAGGCAGTGGATTTTCATCAACTATCATGCTCCGATGTCTTGGAGACCTCTTGGG

17186.1&2

TGCTAGCCATTTTCTGCTTCTTTGGAGAATGAGGCCACACTGACTGCTCATTTGTGCTTGGT
 TCCATGCCAATTGGTGAAATAGAACCCTCATCCGGTAGTGAGCCCGGAGGGACATCTTGTG
 ATCAACGGTGATGCTGCCATTTGGAGCATACAGCCTTGGTGTCTCTGCCATACAGGGCA
 AAGAGCTTGTGACAAAGAGGAGAGATACGGCATGCCCTGTGACGCCCTGATGCACAGTTCC
 TCTGCTGTGTACTCTCCACTGCCCAGCCGGAGGGCTCCCTGTCCGACAGATAGAAGATCA
 CTTCCACCCCTGGCTTG

17187.1&2

TGGCACACTGCTCTTAAGAAACTATGANGATCTGAGATTTTTTGTGTATGTTTTTACTCT
 TTTGAGTGGTAATCATATGTCTCTTAAGATGTACATACCTGCTTCCACAAAATGGAGGGG
 AATTCATTTTCATCACTGGGAGTGTCTTGTGTATATAAAAACCATGCTGCTATATGGCTTC
 AAGTTGTAAAAATGAAAGTGACTTTAAAGAAAAATAGGGGATGGTCCAGGATCTCCACTG
 ATAAGACTGTTTTAACTAACTTAAGGACCTTTGGGTCTACAAGTATAATGAAAAAAATG
 AGACTTACTGGGTGAGGAATTCATTGTTTAAAGATGGTGGTGTGTGTGTGTGTGTGTGTG
 TGTGTTGTGTTCTTTTTGTTTTTAAGCGGAGGGAAATTTAATTTACCCTTGCTTAAAAAT
 ACTGKATAAATATATGTGTGATAATGATTTGCTTGTGVMACATAAAATACGGCTGTATA
 AGTWTARATGCMTCCTGGGKTTGATTTCCMAGATATGATGATAMCCCTTAAAAAT
 GTAACCYGCTTTTTCCCTTTGCTYTGMATTAAGTCTATTCMAAAG

17191.1&89.1

GGGGGTAGGCTCTTTATTAGACGGTTATTCCTGTACTACAGGGTCAGAGTGCCAGTGTAAAGC
 AGTGTACAGAGGCCCCCTTCAGCCCCAAGAAATGTGGATTTCTCTCCCTATTGATCAGAGTG
 GGTGGGTTTCTTCAGAAAAGCCCCAGAGCCAGGGACCAAGTGAAGCTCCAAGGTTAGAAGTG
 GAACTGGAAAGGCTTCAGTCACATGCTGCTTCCAGCCTTCCAGGCTGGCCAGCAACGAGGA
 GATGCCCATGACGTGCCAGGTCTGSSCATCTGACACCACTGAAGTCTGCTAGGACAGCAG
 CCGCACCCCTGCCCTCTGCCAGGAGGCCAATCATGGTAGGCAGCATTCCAGGGTCAAGGGT
 CTGAGTCCGGAAATAGCAGCAGGGGACGGTCCCTGCGGAGAGGCACCTTCTGGCCTGAAGAC
 AGCTCCATTGAGCCCCCTCCAGTACAGGCTAGTGCCTTGGACCAAGCCCCACAGCCTGGA
 AGGGCCGCCCTGCCAGGGCCACGGCCAGGAGCCA

FIG. 15T

17192.1&2

TAATTTCTTAGTGGTTTCGAAATCCTTAAGCATGCAAAAGCTTTGAACAGAAGGGTTACAA
 AGGAACCAAGGTTGTCTTATGCCATCCAGTTAAGCCAGAGCTGGGAATGCCTCTGGGTCAI
 CCACATCAAGAGGAGAAAGCACTTGACTTGTGGTCTCTGCTGCCACGGTTTGGGCGCCACC
 ACGCCACCTCCACCTCTCTCTCCCTGCGGCGCACGTCCTGGGCGGCAAGGTCTCCAAA
 TTGATCTCCAGCTGAGACGTTATATCAATTTGCTGGCTTCCGAAATGATGGTCCATAACCG
 AATCTTCAGCATGAGCCTCTTCACTCTTTGATTTATGAAGAACAATCCCTTCTTCCACTGC
 CCATCAGCACTTTCATTTGTTTTGGGATATTAAATTCTACTTTTGGCCGGTCTTAATTTGA
 ATAGCCTTCCACTCATCCAAAGTCACTCTTTTGGACCTCTCTTTTACCTCTTCAACTTCA
 TTCTCTTAATTTTCACTGTCTGCCACTGGATGATGTTCTTACCTTCAAGGTGTTTCTCAGTC
 ACATTTGATTTGATCCAAAGTCACTTAATTCGTCTTTGACAGTTCCTCCAGTTGTGAGATCCGCT
 ACCTCCAGCTTTGTCTCTCTCTCTCAGGCCAGATCTATCACTTCCACTATGCCATATCAAAAT
 CAGCTTTGCCACGAGAAATCAAAATCCATCTCTCTGGCCCATTCACGTCACGCGCCCTCTCG
 ACCTCTTCCACAGACCACGACCTCGAATAGGTCTGGTCAAFAATCGGTCTATCAACTGAA
 AATTCGCTCTCTCAGCTTTTCTTCAAGTGGCTTTTGAATCTTCTCAGGAGGTGGTCTG
 CTTTCTGGTCTTCTATCAATTAATTTCCCTTCACTCTGAAGTTGTTGATCAGGTCTTCTTCC
 AACTCGTGC

17193

AAGCGGATGGACCTGAETCAGCCGAATCCTAGCCCTTCTCTTGGGCTGCTGTGGTCTC
 GACATCACTGACAGACGGAAGCAAGCAGACCATCAAGGCTACGGGAGCCCTGGGCGGCTT
 GCGAAGATGAAGTTTGGCTGCTCTCTTCCGGCAGCTTATGCTGGCTTTGTCTTAAATG
 GAATCAAGACTGTGAGACCCGCTGCGCTCTCTGCTGAGCAGCCAGCGCAACTGTACCA
 TCGCCTGTCACATTCCTCAGGGAAGTGGCAAGCCGATGCTGTCTGGGAGCTGCTGTGG
 AGAGACTCGGCACTGACTCTCTCTCAJATTCAGGCTTCTCTCAGGAAGGGGCAAAAGTTT
 GTCGAGGAGTGATAGCGGAGCTCTTTCACATTCGGGAAACTTTTCAATGCCCCGAAGACT
 TAACTCCCGATGAGGTTCTGGAACCTAGAAAAATCAAGCTGCACTGACCAACTGAAGCAGA
 AGTACCTGACTGTGATTTCAAGCCCAAGGTGCTTACTGGAGCCCATACCTAGGAAAGGAG
 CGAAGGATGTATTCACCTAGACATCCAGAGCAGCTGATCCCTTGGGGCATGAAGTGT
 GACAAGTGTGCGCTCTGAAAGGAATGTTCCGAGAAACCAGCTAAATCATGGCACCTTC
 AATTTGCCATCTGTACCGCAGACCTGTATAAATAGOTTAAGATGAATTTCCACTGCTTTG
 GAGAGTCCACCCACTAAGCACTGTGCAATCAACAGGTTCCTTTGCTCAGATGAAGGAA
 GTAGGGGGTGGGGCTTCTCTGTGTGATGCTCTCTTAGGCACACAGCCAAATGTCTCAACTA
 CTITGACCTTAGGOTAGAAAGCCAAAGCTGCCAGTAAATGTCTCAGCAATGCTGCTAAATTT
 GGTCTCTCTAATTTCTGGAATGTACAAAATAATGTGTTGTAGATGA

FIG. 15U

16443.1.edi

TCGAGCGGCGGCGCGGCGGAGGTGTGCGGAGTCCAGCACGGGAGGCGGTGGTCTTGTAGTTGT
 TCTCGGCTGCCCCATTGCTCTCCCACTCCACGGCGATGTGCGTGGGATAGAAGCCTTTGAC
 CAGGCAGGTGAGGCTGACCTGGTCTTGGTCACTCTCCCGGATGGGGGCGAGGTGTAC
 ACCTGTGGTTCTCGGGGCTCCCTTTGGCTTGGAGATGGTTTCTCGATGGGGGCTGGGA
 GGGCTTTGTGGAGACCTTGCCTTGTACTCTTGGCATTCACCACTCCTGGTGCANGAC
 GGTGAGGACGCTNACCACACGGTACGNGCTGGTGTACTCTCTCCCGGCTTTGTCTTG
 GCATTATGCACCTCCACGGCGTCCACGTACCAATTGAACCTGACCTCAGGGTCTTCTGGG
 TCACGTCCACCACCGCATGTAACTCAAACTCCGNGCGGANCACGC

16443.2.edi

AGCGTGGTGGCGGCGGAGGTCTGAGGTACATGCGTGGTGGTGGACGTGAGCCACGAAGA
 CCGTGAGGTCAAGTTCAACTGGTACGTGGACGGGTGGAGGTGCATAATGCCAAGACAAA
 GCGCGGGAGGAGCAGTACAAACAGCACGTACCGTGTGGTCAAGCTCCTCAGCTCCTGCA
 CCAGGACTGGCTGAATGGCAAGGAGTACAAGTCCAAGGTCTCCAACAAGCCCTCCAGC
 CCCCATCGAGAAAACCACTCTCCAAGCCAAAGGGCAGCCCCGAGAACACAGGTGTACAC
 CTTGCCCCCATCCCCGGAGGAGATGACCAAGAACCAGGTCAAGCTGACCTGCTGTCAA
 AGGCTTCTATCCCAAGCAGATCGCCCGTGGAGTGGGAGAGCAATGGGCAAGCTGGAGACA
 ACTACAAGACCACGCTCCCTGGTGGACTCCGACACCTGCCGGGCGGCGCTCGA

16444.1.edi

AGCGTGGTTCGCGGCGGAGGTCTCAAGCAAGGCTGGACCTGGATCCCATCAAGTCTTCTG
 CAACATGGAGACTGGTCAAGCTCTCCGTATACCCCACTCAGCCCAAGTGTGGCCGAGAGAA
 CTGGTACATCAGCAAGCAAGCCCAAGGACCAAGAGGCAATGTCTCGTTCCGCGAGACCAAGAC
 CGATGCCATTCCAGTTCCAGTATGGCGGCGAGGGCTCCGACCTGCCCATGTGGACCTGCCG
 GGGCGGNGCGCTCGA

16445.1.edi

AGCGTGGTTCGCGGCGGAGGTCAAGCAAGGCTGGACCTGGATCCCATCAAGTCTTCTG
 CACTCTGACTGGAAGACTGGAGACTGGAATTGACCCCAAGCAAGGCTGCCAAGCTGGAT
 GCCATCAAGTCTTCTGCAAGCAAGGAGACTGGTGGAGACTGGGTGTACCCCACTCAGCCCA
 GTGTGGGCCAGAGAACTGGTACATCAGCAAGCAAGCCCAAGGACCAAGAGGCAATGTCTGGT
 TCGGCGAGAGCATGACCAATGGATTCCAGTTCCAGTATGGCGGCGAGGGCTCCGACCTG
 CCGATGTGGACCTGCCCGGGCGGCGCTCGA

FIG. 15V

16445.2.edit

TCGAGCGGTCCGCCGGGCAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCG
 AACTGGAATCGATCGGNCA TGCTCTCGCCGAACCAGACATGCCTCTTGNCTTGGGGTTCT
 TGCTGATGTACCAGNTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACC
 AMTCTCCATGTTGCANAAGACTTTGATGGCATCCAGGTTGCAGCCTTGOTTGGGGTCAATC
 CAGTACTCTCCACTCTTCCAGACAGAGTGGCACATCTTGAGGTCACGGCAGGTCCGGGGCG
 GGTTCTTGACCTCGGTCCGACCCAGCT

16446.1.edit

TCGAGCGCGCCGCCGGGCAGGTCCCTCTCAGAGCGGTAGCTGTTCTTATTGCCCGGCAGC
 CTCCATAGATNAAGTTATTGCANGAGTTCTCTCCAGGTCAAAGTACCAGCGTGGGAAGG
 ATGCACGGCAAGCCCCAGTGACTCGGTTGGCGGTGCAGTATTCTTCATAGTTGAACATATC
 GCTGGAGTGGACTTCAGAACTCTGCTTCTGGGAGCACTTGGGACAGAGGAATCCCTGC
 ATTCTGCTGGTGGACCTCGGCCGGGACCCAGCT

16446.2.edit

AGCGTGCTCCCGCCCGAGGTCCACCACCAAGGAATCCAGCGGATTCTCTGTCCCAAGTGC
 TCCCAGAAAGCCAGGATTCTGAAGACCACTCCAGCGATA TGTTCAACTATGAAGAATACTG
 CACCGCCAACGCAGTCACTGGCGCTTGCGGTGCATCTCTCCACGCTGGTACTTTGACGTG
 GAGAGGAACCTCTGCAATAACTTCATCTATCGAGGCTCCCGCGCAATAAGAACAGCTAC
 CGCTCTGAGGAAGACCTCCCGCGCGCGCCCTCGA

16447.1.edit

TCGAGCGCGCCGCCGGGCAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCATACTCG
 AACTGGAATCGATCGGTCATGCTCTCGCCGAACCAGACATGCCTCTTGTCTTGGGGTTCT
 TGCTGATGTACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCAGGTCTCACC
 AGTCTCCATCTTGCAGAAAGACTTTGATGGCATCCAGGTTGCAGCCTTGOTTGGGGTCAATC
 CAGTACTCTCCACTCTTCCAGCCAGATGGCACATCTTGAGGTCACGGCAGGTCCGGGGCG
 CGTTCTTGACCTCGGTCCGACCCAGCT

FIG. 15W

16447.2.edit

AGCGTGGTGGGGGGGAGGTCAAGAAACCCCGCCGACCTGCCGTGACCTCAAGATGTG
 CCACTCTGGCTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGA
 TGGCATCAAAGTCTTCTGCAACAAGGAGACTGGTGAGACCTGCCGTGACCCCACTCAGCCC
 AGTGTGGCCGAGAAGAACTGGTACATCAGCAAGAACCCCAAGGACAAGAGGCCATGTCTGG
 CTCGGCCGAGAGCATGACCGATGGATTCCAGTTCCAGTATGGCGGGCCAGGGCTCCGACCCCT
 CCGGATGTGGACCTCCCCGGCGGGCCGCTCGA

16449.f.edit

AGCGTGGTGGGGGGGAGGTCCCTGTCAAGTGGCACTGGTAGAAGNTCCAGGAACCCCTGA
 ACTGTAAGGGTTCTTCATCAGTGCCAAACAGGATGACATGAAATGATGTACTCAGAAAGTGTG
 CTGNAATGGGGCCCATGANAATGOTTGNETGAAGAGAGACTTCTTGTCTTACATTCCGGCG
 GTATGGTCTTGGCCTATGCCCTTATGGGGGTGGCCGTTGNGGGCGGTGNGGTCGGCCTAAAA
 CCATGTTCTCAAAGATCAATTGTGTGCCCAACACTGGGTTGCTGACCANAAGTCCAGGAA
 GCTGAATACCATTTCCAGTGTGATACCCAGGGTGGGTGACGAAAGGGGCTCTTTGAAGTGT
 GGAAGGAACATCCAAAGATCTCTGNTCCAAGAGATTGGGGTGTGGAAGGGTTACCAAGTTG
 GCGAAGCTCGCTGTCTTTTCTTCCAATCANGGGCTCGCTCTTCTGAATATTCTTCAGGGC
 AATGACATAAAATGTATATTGGGTTCGGGTTCACGGCCAG

16430.1.edit

TGGAGCGGCGCGCGCGGAGGTCCAGGTCCACCAACCCAACTCCTTGGCTGATATCATGGCAGCCCG
 CACGTGGCAGGATTACCCGCTAGATATCAAGTATGACAAAGCCTGGGTCTCTTCCAGAGA
 AGTGTCCCTGGCGCCCGCCCTGGTGTCAAGAGGCTACTATTACTGGCCTGGAACCGGGGA
 ACCGAATATAGCAATTTATGTCAATCCGCTGAAGAAATATCAGAACACCGAGCCCTGATTC
 GAAGGAAAAAGACAGACCGAGCTTCCCAACTGGTAAGCCTTCCACACCCCAATCTTCATG
 GACCAAGAGATCTTGGATCTTCTTCCACAGTTCAAAAGACCCCTTCTCTCAGCCACCCCTGG
 GTATGACACTGGAAAATGGTATTCAGCTTCTTGGCACTTCTGCTCAGCAACCCAGTCTTGGG
 CAACAAATGATCTTTGANGAATATGNTTACGGGGACCAACCGGCGCCACAAAGGGCCACC
 CCCATAAGCCATAGGCCAAGAPCATACCTGNGGAATGTAGGACAAGAAAGCTCTNTCTCAN
 ACAANGATCTCATGGGGCCCATTCANGACACTTCTGAGTACATCANTTCAAGGCATCCTG
 GTGCCACTGATAAAAAGCCTTACACTTA

16430.2.edit

AGCGTGGTGGGGGGGAGGTCTCTCTCAAGTGGCACTGGTAGAAGTTCCAGGAACCCCTGA
 ACTGTAAGGGTTCTTCATCAGTGCCAAACAGGATGACATGAAATGATGTACTCAGAAAGTGTG
 CTGGAATGGGGCCCATGAGATGCTTGTGTGAGAGAGACTTCTTGTCTTACATTGGGGCGGG
 TATGGTCTTGGCCTATGCCCTTATGGCCCTGGCCGTTGTGGGCGGTGTGGTCCGCCCTAAAA
 CATGTTCTCAAAGATCAATTGTGTGCCCAACACTGGGTTGCTGACCAGAAAGTCCAGGAAAG
 CTGAATACCATTTCCAGTGTGATACCCAGGGTGGGTGACGAAAGCCGCTCTTTGAAGTGTG
 GAAGGAACATCCAAAGATCTCTGGTCCATGAAGATTGGGGTGTGGAAGGGTTACCAAGTTGG
 GGAAGCTCGTCTGTCTTTTCTTCCAATCANGGGCTCGCTCTTCTGATTATTCTTCAGGGC
 AATGACATAAAATGTATATTGNTTCCCGGCTNAGCCAAATAATAAACCCTCTGTGACA
 CCANGGGCGCGCGCGGAGGAGCAACT

FIG. 15X

16451.1.edit

AGCGTGGTCCGGGCGGAGGTCTCACCAGAGGTACCACCTACAACATCATAGTGGAGGCCA
 CTGAAAGACCAGCAGAGGCCATAAGGTTCCGGGAAGAGGTTGTTACCGTGGGCAACTCTGTC
 AACGAAGGCTTGAACCAACETACGGATGACTCGTCTTGGACCCCTACACAGTTTCCATT
 ATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAACTGTTGTGCCAGTG
 CTTANGCTTTGGAAAGTGGTCATTTAGATGTGATTCATCTAGATGGTGCCATGACAAATGGT
 GTGAACTACAAAGATTGGAGAGAAAGTGGGACCGTCAGGGAGAAAATGGACCTGCCCGGGC
 GGGCGCTCGA

16451.2.edit

TGGAGCGGCGCGCGGGCAGGTCCATTTTCTCCCTGACGGTCCCACCTTCTCTCCAATCTTGT
 AGTTCAACCAATTGTATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCCAAA
 GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTGAGACATTCGTTCCCACTCATCTCCA
 ACGGCATAATGGGAAACTGTGTAGGGGTCAAAGCAGGATCATCCGTAGGTTGGTTCAAG
 CTTTCGNTGACAGAGTTGCCCAAGGTAAACAACCTCTTCCCGAACCTTATGCCCTCTGCTGGT
 CTTTCAGTGGCTCCACTATGATGTTGTAGGTGGTACCTCTGGTGAGGACCTCGGCGCGGAC
 CACGCT

16452.1.edit

AGCGTGGCGCGCGCGGCAAGTCCATTGCTCTGGAACGGCATCAACTTGGAAAGCCAGTGAATCG
 TCTCAGCCTTGGTTCTCCAGCTAATGGTGAATGGNGGTCTCAGTAGCACTGTCTCAGCGAGC
 CTTCTTCTGCTGGCTGACATTTCTCCAGACTGGTQACAAGACCCCTGAGCTGGTCTGCTTGT
 AAAGTGTCTTAAAGATCAGACACTCACTTCATATTTGGCGNCCACCATAAGTCTGTATA
 CAACCACGGAAATGACCTGTACAGCAAC

16452.2.edit

TGGAGCGGCGCGCGCGGCAAGTCTCAGACCGGGTTCTAGTACACAGTCACTGTGGTTGC
 CTTCCACGATGATATGGAGAGCCAGCCCTGATTGGAAACCAAGTCCACAGCTATTCTGCA
 CCAACTGACCTGAAGTCACTCAGGTACACCCACAAAGCCTGAACCGCCAGTGGACACCA
 CCCAATGTTGAGTCACTGGATACTGAGTGGGGTGAACCCCAAGGAGAAAGACCGGACCA
 ATGAAAGAAATCAACCTTCTCTGACAGCTCATCCGTGGTTGTATCAGGACTTATGGCGG
 CCACCAAAATATGAAGTCACTGTCTATCTCTTAAAGGACACTTTGACAAAGCAGACCAGCTCA
 GGGTGTGTGACCACTCTGGAGAATGTCAAGCCCAACCAAGAAAGGCTGGTGTGACAGATGC
 TACTGAGACCAACATCAACATTAGCTGGAGAACCAAGACTGAGACGATCACTGGCTTCCA
 AGTTGATGCGGTCTCAGCCCAATGGACCTCGGCGCGGACCAAGCTT

FIG. 15Y

16453.1.edit

AGCGTGGTCGGCGGCGGAGGTCTGGCCGAACTGCCAGTGTACAGCGAAGATGTACATGTTA
TAGNTTTTCTCGAAGTCCCGGGCCAGCAGCTCCACGGGGTGGTCTCCTGCTECAGGGCGCT
TCTCATTTCTCATGGATCTTCTTACCCGCGAGCTTCTGCTTCTCAGTCAGAAAGGTTGTGTCC
TCATCCCTCTCATACAGGGTGACCAAGACGTTCTTGAGCCAGTCCCGCATGGCGAGGGGGA
ATTGGGTACAGCTCAGAGTCCAGGCAAGGCGGGATGTATTGCAAGGCCCCGATGTAGTCCA
AGTGGAGCTTGTGGCCCTTCTTGGTGCCCTCCAAGGTGCACCTTGTGGCAAAGAAGTGCCA
GGAAGAGTCGAAGGTCTTGTGTGTCATTGCTGCACACCTTCTCAAACCTGCCAATGGGGGCT
GGGCAQACCTGCCCGGGCGGCCGCTCGA

16453.2.edit

TCGAGCGGCGCGCGCGGCGGCAAGGTCTGCCCCAGCCCCCATGGCCAGTTTGAGAAGGNGTGCA
GCAATGACAACAAGACCTTCGACTCTTCTGACACTTCTTTGCCACAAAGTGCACCCCTGGA
GGGCACCAAGAAGGGGCCACAAGCTCCACCTGGACTACA TCGGGCCTTGCAAATACA TCCC
CCCTTGCTTGAGCTCTGAGCTGACCGAATTCGCCCTGCCCATCGGGGACTGGCTCAAGAAC
GTCTGTGTCACCTGTATGAGAGGGATGAGGACAACAACCTTCTGACTGAGAAGCANAAG
CTGCGGGTGAAGAANAATCCATGAGAATGANAAGCGCTGNAGGCANGAGACCACCCCT
GGAGCTGCTGGCCCCGGCACTTCGAGAAGAACTATAACATGTACATCTTCTGTACACTGG
CAGTTGGCCAGACCTCGCCCCGGGACCCCT

16454.1.edit

AGCGTGGNTGCGGACCAACGCCCACAAAGCCATGCTATGTAGTTTTANTTCAGCTGCCAAN
AATACGNCACCATCCACCTTACTAACCCAGCATATGCAGACA

16454.2.edit

TCGAGCGGTGCGCGCGCGGAGGTCTGGCTGCAATAGCACCGGCCATATTTTGGAAATGGATCA
GCTCTGOCACCTGAGCAGCCGAGCCAGGACTTGGTCTTAGTTGAGCAATTTGGCTAGDA
GGATAGTATGCAACACCTTCTGAGTCTGTGGATAGCTGCCATGAAGNAACCTGAAGGA
GGCGCTGGCTGTANCCCTTGATTACAGGCTGGGAAACAGCTGTACACTTGGCATTCTCT
GCATATACTGONTAOTCAGCCGAGCTTGGCGCTCTTCTTGGCTGAGCTAAAGCTACATA
CAATGGCTTTGNGGACCTCGCCCCGGGACCCCT

FIG. 15Z

16455.1.edi

TCGAGCGGCGCGCGCGGCGGCGAGGTCCATTTTCTCCCTGACGGTECCACTTCTCTCCAATCTTGT
 AGTTCACACEATTGTGATGACACCATCTAGATGAATCAGATCTGAAATGACCACTTCCAAA
 GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTCAGACATTCGTTCCCACTCATCTCCA
 ACGGCATAATGGGAAACTGTGTAGGGGTCAAAGCAGGAGTCATCCGTAGGTGTGTTCAAG
 CTTTCGTTGACAGAAAGTTGCCACGGTAACAACCTCTTCCCGAACCTTATGCCCTCTGCTGGT
 CTTTCAAGTGCCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTCGCGCCCGA
 CCACGCT

16455.1.edi

AGCGTGCTTTGCGGCGGAGGTCCCTCACCANAGGTGCCACCTACAACATCATAGTGGAGGC
 ACTGAAAGACCAAGCAGAGGCATAAGCTTCGGGAAGAGGTTGTTACCGTGGGCAACTCTGT
 CAACGAAGGCTTGAACCAACCTACGGATGACTCGTCTTTCACCCCTACACAGNTTCCCAT
 TATGCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAGGCTTTAAACTGTTGTGCCAGT
 GCTTANGCTTTGGAAGTGGTCAATTCAGATGTGATTTCATCTANATGGTGTGATGACAATGG
 TGNCAACTACAAGATTGGAGAGAGTGGNACCGTCAGGGGANAAAAATGGACCTGCCCGG
 GCGGCNCGCTCGA

16456.1.edi

AGCGTGCTGCCGCGCGGAGGTCTCTGCTTCTGCTGANGTGAATTATCCTGAACCATCCAGGCC
 AAATAAGCOCGCGCTATGCCCGTGNATTGCAATGGCACACGGCTCACAATGGCATGCAAGTT
 TGCTGAGCTCAAGGAAAGATTGATC

16456.2.edi

TCGAGCGGCGCGCGCGGCGGCGAGGTCCAAATGAAACAAACAGTTCTGAGACCGTTCTTCCACCA
 CTGATTAAAGACTGCGCGCGCGGCTATTAGGGAATAATTCATTTAGCCTTCTGAGCTTTCT
 GGCAGACTTGCTGACTTCCAGCTCCAGCAGCTTCTGCTCCACTGCTTTGATGACACC
 CACCGCAACTGTCTGTCTCATATCAGCAACAGCAAGCGACCCAAAGGTGGATAGTCTGA
 GAAGCTCTCAACACACATGGGCTTCCAGGAACCATATCAACAAATGGCCAGCATCACCAG
 ACTTCAAGAAATTTAAGGCGCATCTTCCAGCTTTTACCAGAACGGCGATCAATCTTTTCTT
 CAGCTCAGCAAACTTCCATGCCAATGTGAGCGG

FIG. 15AA

16459.1.edit

TCGAGCGGGCGGGCGGGCGGGCAGGTCCAGAGGGCTGTGCTGAAGTTTGCTGCTGCCACTGGAG
 CCACTCCAATTGCTGCCCCGTTCACTCCTGGAACCTTCACTAACCAGATCCAGGCCAGCCTT
 CCGGGAGCCACGGCTTCTTGTGNTACTGACCCAGGGCTGACCACCAAGCCTCTCAGCGAG
 GCATCTTATGTTAACCTACCTACCATTCGCGCTGTGTAAACACAGATTCTCCTCTGCCCTATGT
 GGACATTGCCATCCCATGCAACAACAAGGGAGGTCACCTCAGNCGGGTTTGATGTGGTGGAA
 TGCTGGCTCGGGAAATTTCTGCGCATGCGTGCCACCATTTCCCGTGAACACCCATGGGANGN
 CATGCCCTGATCTGGACTTCTACAGAGATCCTGAAGAGATTGAAAAAGAAGAACAGGCTGN
 TTGCTGANAAAAACAAGTGACCAAGGANGAAATTCANGGGTGAAANGGACTGCTCCCGCT
 CCTGAATTCACTGCTACTCAACCTGANGNTGCAGACTGGTCTTGAAAGONGNACANGGGCC
 CTCTGGGCCTATTTAAGCANCTTCGGTGCGGAACAGNT

16459.2.edit

AGCGTGNCTCGCGGGCGAGGTGCTGAATAGGCACAGAGGGCACCTGTACACCTTCAGACC
 AGTCTGCAACCTCAGGCTGAGTAGCAGTGAACCTCAGGAGCGGGAGCAGTCCATTCAACCT
 GAAATTCCTCTTGGNCACTGGCTTCTCAGCAGCAGCCTGCTCTTCTTTTCAATCTCTTCA
 GGATCTCTGTAGAAAGTACAGATCAGGCATGACCTCCCATGGGTGTTACAGGGAAATGGTG
 CCACGCATGCCGAGAAGCTTCCCGAGCCAGCATCCACACATCAAAACCCACTGAGTGAGGT
 CCGTGTGTGTTCATGGCATGGGCAATGTCCACATAGCCGAGAGGAGAAATCTGTGTACAC
 AGCGCAATGGTADGTAGGTTAACAATAAGATGCTCTCGGAGAGAGCTGGTGTCAGCCCTG
 GGTCAAGTAACCAACAAGAAAGCTGTGGTCCCGGAAGGCTGCTGGATCTGGTTAGTGAA
 GGNTCCAGGAGTGAAACCGCCCAACAATTCAGTGGCTTCAGTGCCAAGCAGCAAACTTCA
 GCACAAGCCCTCTGGAACCTGCCCCGGCGCCCTCTGA

16460.1.edit

TCGAGCGGGCGGGCGGGCGAGGTCCATTCTCCTGACCGNCCCACTTCTGTCCAATCTTGT
 AGTTACACACCAATTGTATGGGCACCATCTAGATGAATCACATCTGAAATGACCACCTTCCAAA
 GCTTAAGCACTGGCACAACAGTTAAAGCCTGATTCAGACATTGTTCCCACTCATCTCCA
 ACGGCATAATCGGAAGCTGTGTACCGCTCAAAACAGGAGTCAATCCGTACGTTGGTCAAG
 CTTCTGTTGACAGAGTTGCCACCGTAACACCTGNTCCCGGAACCTTATGCTCTGCTGG
 GCTTTCAGNCCCTCCACTATGATGNTCTAGCGGGCGGCACCTCTGNGANGACCTCGCCCCG
 GACCACCT

16460.2.edit

AGCGTGGCTCGCGGGCGAGGTGCTACCAAGAGGTGCCACCTACAACATCATAGTGGAGGCA
 CTGAAAGACCAGCAGAGCCATAGCGCTCGGGAAAGAGGTTGTTACCGTGCGGCAACTCTGT
 AACGAAGGCTTGAACCAACCTACGGAATGACTCGTGCTTTGACCCCTACACAGTTTCCCAT
 ATGCCCTTGGAGATGACTGGGAACCAATGTCTGAATCAGCTTTAAACTGTTGTGCCAGTG
 CITANGCTTTGGAAGTGGGTCAATTCAGATGTGATTCATCTAGATGGTGCCATGACAATGG
 NGNGAACTACAAGATTGGAGAGAACTGCAACCCNACGGGACAAAAATGGAACCTGCCCCGG
 CGGCCGCTCGA

FIG. 15BB

16461.1.edt

AGCGTGGTCGGCGCCGAGGTCCACATEGGCAGGGTCGGAGCCCTGGCCGCCATACTCQAA
 CTGGAATCCATGGGTCAATGCTCTGCCCGAACCAGACATGCCCTCTTGTCCTTGGGGTTCTTGC
 TGATGTACCAAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACGCCAGGTCTCACCAGT
 CTCCATGTTGCAGAAGACTTTGATGGCATCCAGGNTGCAACCTTGGTTGGGGTCAATCCAG
 TACTCTCCACTCTTCCAGCCAGAGTGGCACATCTTGAGGTACGGCAGGTGCGGNCGGGGG
 NTTTTGCGGCTGCCCTCTGGNCTTCGGNTGTNCTGNATCTGCTGGCTCA

16461.2.edt

TCGAGCGCGCCGCCCGGGCAGGTCTCGCGGTGGCACTGGTGATGCTGGTCCTGTTGGTCCCC
 CCGGCCCTCCTGGACCTCCTGGCCCCCTGGTCTTCCAGCGCTGGTTTCGACTTCAGCTTC
 CTGCCCCAGCCACCTCAAGAGAAGGCTCAGGATGGTGGCCGCTACTACCGGGCTGATGAT
 GCCAATGTGGTTCTGTGACCGTGACCTCGAGGTGGACACCACCTCAAGAGCCTGAGCCAG
 CAGATCGAGAACATCCGGAGCCAGAGGCCAGNCCGAAGAACCCTCCCGCAGCTGCCGT
 GACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAA
 GCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCCGTGA
 CCCCCTCAGCCCAAGTGTGGCCCAAAAGAACTGGTACATCAGCAAGAACCCCAAGGACAA
 GAAGCATGTCTGGTTGGCCGAGAACAAGACCGATGGATTCCAGTTGGAGTATGGCGGGCA
 GGGCTCCGACCTGCCGATCGGGACCTTGGCCCGGAACACGCT

16463.1.edt

ACCGTGGNNGCCCCGAGGTATAAATATCCAGNCCATATCCTCCCTCCACACCGCTGANAG
 ATGAAGCTGTNCAAAGATCTTAGGGTGGANAAAACCAT

16463.2.edt

TCGAGCGCGCCGCCCGGGCAGGTCTTTCAGACTTGGACTGTGTCACTGCCAGGCTTCCAG
 GGCTCCAACCTTGCAGACGGCTCTGTGGCGACAGTCTCTGTAAATGCCGAAAGCAACCATG
 GAAGACCTCGGGGAAAACACEATGGTTTATCCACCTGAGATCTTTGAACAACCTTCATCT
 CTCAGCCTCGGGAGCGAGGCTCTGGACTGGATATTCTACCTCGGCCCGACCAACCT

FIG. 15CC

16464.1.edit

CGAGCGGGGACCGGGCAGGTNCAGACTCCAATCCANANAACCATCAAGCCAGATGTCAG
 AAGCTACACCATCACAGGTTTACAACCAGGCACTGACTACAAGANCTAGCTGCACACCTTG
 AATGACAATGCTCCGAGCTCCCCCTGTGGTCAATCGACGCTCCACTGCCATTGATGCACCAT
 CCAACCTGGCTTTCCCTGGCCACCACACCCAAATTCCTTGGCTGATCATGGCAGCGGCCAGG
 TGGCAGGATFACCGGTACATCATCNAGTATGANAAGCCTGGGCTCCTCCAGAGAAAGNO
 GTCCCTCGCCCCCGCCCTGNTGTCCANAGGNTACTATTACTGNGCCNGCAAACCGGCAACC
 GATATCNATTTTGNCAATTGGCTTCAACAATAATTA

16464.2.edit

AGCGTGCTTCGGCGCCGANGTCTGTGAGAGTGGCACTGGTAGAAGTTCAGGAACCGTG
 AACTGTAAGGGTTCTTCAACAGNCCAAACAGGATGACATGAAATGATGTACTCAGAAAGTG
 TCTTGAATGGGGCCCATGAGATGCTTGTCTGAGAGAGAGCTTCTTGNCTGTCTTTTTC
 TTCCAATCAGGGGCTCGCTCTTGTGATTAATGTTCAAGGGCAATGACATAAAATTGTATATTGG
 GGTCCCGGNTCCAGGCCAGTAATAGTANCTCTGTGACACAGGGCGGNGCCGAGGGGACC
 ACTTCTCTGGGAGGAGACCCAGGCTTCTCACTTGTATGATGTAACCGGTAATCCTGGCAC
 GTGGCGGCTGCCATGATACCAGCAAGCAATTGGGGTGTGGTGGCCAGGAAACCGAGGTTG
 GATGGNGCATCAATGGCAGTGGAGGCTCTGATGACACAGGGGGAGCTCCGACATTGTC
 ATTCAAGGTG

16465.1.edit

AGCGTGGNCGCGGCCGAGGTCCAGGCGCGGCTGTGCCACCTTCTGCTCTCTCCCCAAGGAT
 AAGGAGGGTNCCTCCCCCAGGAGAACATTAACTNTCCGAGCTCGGCTGTGGCGG

16465.2.edit

TGGAGCGCCCGCCCGGCCAGGTTTTTCTGCAAGTGGNTACTTTATTGNTGGGAAAG
 GGAGAAAGCTGTGGTCAAGCCCAAGACGGCAATACAGAGNCCGAAAAAGGGGAGGCCAGGT
 GGGCTGGAAGCAGAGCCAGGGCAGGCAAACTTCTCTCTCACTGCTCAAGCTGGTG
 GTGGCTGGAGCTCAVAAATGGGAGTGAACAGGACACCTTCCCAAGCCATTGGGGCGG
 CATTTCACTCTGGCCAGGACACTGGCTGTCAGCTGGCACTGGTCCCGACAGAACGCTGGAGC
 TGGGCAAGTTAAATGTTCACTTGGGGGACGCACTCTCTTATCATTONGCAGAGAGCAG
 AAGGTGGCACAGCCCCGCTCTGACCTCGGCTGGGACCAAGCT

16466.1.edit

TGGAGCGCCCGCCCGGCCAGGTCACCATTAAGTCTGTATACAAGCAGCGATGAGCTGTCA
 GGAGCAAGGTTGATTTCTTTCAATGGTGGGNTCTCTCTTGGGCGNCACTCGCACTGAT
 ATCCAGTGAGCTCAACATTGGGTGGCTCCACTGGGCTCAGGCT

16466.2.edit

TGGAGCGGTTTGGCCCGGCCAGGTCACCATTAAGTCTGTATACAAGCAGCGATGAGCTGTCA
 CCAGGTGCCAGGATTACCGGCTATATCATCAAGTATGACAAGCTGGGTCTCTCTCCAGAG
 AAGCGGTCTCTGGGCGCCGCTGGGTGTCAAGAGGCTACTATTACTGGGCTGGAACCGGG
 AACCGAATATACAATTTATGTCATTGNGCTCAAGAAATAATCANVAAVAGCGANCCCTGA
 TTGGAAGGA

FIG. 15DD

06_16471.edit

AGCGTGGTCGCGGCGCGAGGTCTGCTGCTTCAGCGAAGGGTTTCTGGCATAACCAATGATA
 AGGCTGCCAAGACTGTTCCAATACCAGCACCAGAACCAGCCACTCCTACTGTTGCAGCAC
 CTGCACCAATAAATTTGGCAGCAGTATCAATGTCTCTGCTGATTGCACTGGTCTGAAACTC
 CCTTTGGATTAGCTGAGACACACCAATTCTGGGCGCTGATTTTCCTAAGATAGAACTCCAAC
 TCTTTGCCCTCTAGCACATAGCCATCTGCTGGTCACACTGTCCCGGCTTGAAGCGATGC
 ACCCAAGAAGCTTTCCTGCTGGAACCTGCTCCAGGAGACTGCTGATTTTGGCAITCTT
 TTTCCITTCATCATAATTTCTCTGAATTTTATAGATCGTTTTTGTTTAAATCTCTTCTTCC
 TCAGGAGTCAGCTTGGCCCCCGCCCATCCACACAGTCCGTGTGCGGGGAGGTAAACAAGA
 AATACCTGTCCCTGAGGTGGACGTGGGGAATTTCTCTGGGGCTCAGAGTGGTGTACTCG
 TAAAACAAGGATCATCGATGGTGNCTACAATGCATCTAATAACGAGCTGGGTCCGACCCA
 AAGAACCTGGNGAANAATAATGGATCGNCTCATCGACAGGACACCGTACCCGACAGGGGNA
 CGANTCCCACTATGCGCTTCCCCCTGGGCGGCAANAAGGAAAACTCCCCGGCGGCGCNT
 CGAAAGCCCAATTNTGGAAAAATCCATCACACTGGGNGGCCNGTCGAGCATGCATNTAN
 AGGGGCCCCATCCCCCTNAXN

07_16472.edit

TCGAGCGGCGCGCGCGGCAAGTCCCAACCAAGGCTGCAACCTGGATGCCATCAAAGTCT
 TCTGCACATGGAGACTGGTGAGAGCTGGGTGTACCCCACTCAGCCCACTGTGTGCCCCAGA
 AGAACTGGTACATCAGCAAGAACCCCAAGGACAAGAAGCATGTCTGGTTCCGCGAGAGCA
 TGACCGATGGATTCCAGTTCAGTATCGCGGCCAAGGCTCCGACCTGCCGATGTGGACCT
 CCGCGCGGACCAAGCT

08_16472.edit

AGCGTGGTCGCGGCGCGAGGTCCACATCGGCAAGGCTGGGAGCCCTGGCGGCCATACTCGAA
 CTGGAAATCCATCGGTGATGCTCTCCCAACCAAGACATGCCCTCTTGTCTTGGGTTCTTGC
 TGATGTACCAAGTTCTTCTGGGCGCACTGGGCTGAGTGGCGTACACCGACGCTCTCACCAGT
 CTCCATGTTGCAAGAGACTTTGATGGCATCCAGGTTCAGGCTTGGTTGGGGACCTGCCCG
 GCGGCGCGCTCGA

09_16473.edit

TCGAGCGGCGGCGCGCGGCAAGGTCCACACACCAATTCCTTGGCTGGTATCATGGCAGCCCG
 CACGTGCCAGGATTACCGGCTACATCATAGTATGAGAAGCCTGGGTCTCTCTCCAGAGA
 AGTGGTCCCTCGGCGCGCGCGCTGCTCTCACAGGCTACTATTACTGGGCTGGAACCGGGA
 ACCGAATATACAAATTAATGTGATGCTGCTGGAAGAAATATCAGAAGAGCGAGCCCTGATTC
 GAACGAAAAAGACAGACGAGCTTCCCAACTGCTAAGCTTCCACACCCCAATCTTCAATG
 GACCAAGAGATCTTGGATGTTCCTTCCACAGTTCAAAAGACCCCTTTGCTCACCCACCTTGG
 GTATGACACTGGAAATGGTATTCAGCTTCTGCGCACTTCTGCTCAGCAACCCAGTGTGGG
 CAACAAATGATCTTTGACGAACATGONTTACGCGGACCAACCCGCGCACAGCGGCCACC
 CECATAAGGCAAGGCCAAGACCAATACCCCGCGAATGTAGGACAAGAAGCTNTNTNTCAN
 ACACCATNTNATCGGCGCGCATTCAGGACACTTCTGAGTACATCAATTAATGNCATCTGTGG
 CACTTGAATGAAAGCCCTTACAGTTCAAGCTTCTGGAATTTTACCAGCCCTNTTACAGGAC
 TNGGCGCGGACVCTTAAGCENATTCAGCTTGGGCGCTTCTANGGTCCCACTCGNNCACTG
 GNGAAAAATGGCTACTGTN

FIG. 15FF

11_16474.edlt

ACCGTGGTCCGGCCGAGGTCCACTAGAGGTCTGTGTGCCATTGCCAGGCAGAGTCTCTG
 CGTTACAAACTCCTAGGAGGGCTTGTCTGTGGGAGGGCCTGCTATGGTGTGCTGCGGTTCA
 TCATGGAGAGTGGGGCCAAAGGCTGGGAGGTGTGTGTGTGTGNGAACTCCNAGGACANG
 AGGGCTAAATTCCATGAAGTTTGTGGATGGCCTGATGATCCACAAATCGGAGACCCGTGTAA
 CTACTACCGTCCNACCCCTGCTGTNCNCCCCCNTTTCTGCTNAANACATNGGGNTNNTNC
 TTGNCCNTCTTGGGTNGAANATNNAATNGCCTNCCCNNTTNTANENCTACTNNTCCANA
 NTTGCCCTTTAAANAATCCNCCCTTGCCTTNNNCACTGTTCAANNNTNTTNTNNTCGTAAACCT
 ATNANTTNATTANATNNTNNTNNTNCTCACCCCCTTNTCATTNANCCNATANGCTNNNA
 ANTCTTNANNCCCTCCCNCCCNNTNCTNTACTNANTNCTTCTNCCCATTACNNAGCT
 CTTCNTTTAANATAATGNNGCCNNGCTCTNCAINTCTACNATNTGNMNAATNCCCCCNCC
 CCCNANCCNNTTTTGGACCTNNNAACCTCCTTTCTCTTCCCTNCCNNAATNCCNNTTCC
 NENTTCCNNTTTCGGNTNNTCCCATNCTTTCCANNMCTTCAANTCTANCCNCTNCAACT
 TATTTCTCTNCTATCCCTTNTTCTTACANNCCCCCTNNTCTACTNCCNNTTNCATTANAT
 TTGAAACTNCCACNCTANTNCCCTCCTCTACNNTTTATTTTNGGNTCCTCTACNTAAT
 ANTTAATNANTTNTCN

12_16474.edlt

TCGAGCGGCGCGCGCGGAGGTCTGCCAAGGAGACCTGTTATGCTGTGGGACTGGCTG
 GGGCATGGCAGCGCGCTCTGCTTCCACCTTCTGTTCTGAGATGGGGGTGGTGGGCACT
 ATCTCATCTTTGGGTTCACAAATGCTCAGCTGCTCAGGCAGGGGCTTCTTAGGGCCAATCT
 TACCACTTGGGTCCGAGGCGAGCATGATCTTCACTTGAATGCCAGGCACACCTGTCTGAG
 CAACACGTGGCCCAAGGCACTCTCAAGCTAGTAAGTTAACAGGGGTCTCCGCTGTGATC
 ATCAGGCCATCCACAACTTCAATGCAATAGCCCTCTGTCTCTGGAGTTTCCAGACACCA
 CAACCTCCAGGCTTTGGCCCTCACTCTCATGATGAACCGGAGGACACCATACAGGGCTT
 CCGCACAAAGGCTCTCTAAGAAATTTGTAACCGCANANACTCTGCTGCCAATGGCACAC
 AAACCTCTAAGTGCACCTCGGCGCGGAGCTACCC

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TCGAGCGGCGCGCGCGGAGGTCTGGTCTAGGATAGCCCTGGGAGTCTCTCTACTGCTACTC
 CAGACTTGACATCATATGAATCATAGCTGGGACAAATAGTTCTGAGGACCACTAGGOCATG
 ATTACAGATTCCAGCGGGGCGGAGGACAAACAGGGGACCTGCTTGTCTTGGAAATACAG
 GGTACCATTTCTCCAGGAAATACAGGAGGCTTGGATCTGCTTGGGCGCTTGAGGTCC
 TTGACCATTAAGAGGGGCGAGTAGGAGGACTTGGAGGCTGTGGGCAAACTGCACAACTTC
 TCCAAATGGAATTTCTGGGTTCGGGCACTCTAATCTTGATCCGTACATATTATGTCTATG
 CAGAGAACGGATCTGTAGTCAACACACATATTTCGATCTGCTTCTGCTTCCAGACATCTC
 TATCCGNCATAGGACTGACCAAGATGGCAACATCTCTCTCAACAAGCTTNTCTGTTGTGCC
 AAAAATAATAGTGGGATGAAGCAGACGAGAACTANCCAGGCTCCCTTTTCCACAAAGC
 NTCATCATGTCTAAATATCAGACATGAGACTCTTTGGGCAAAAAGGAGAAAAAGAAAA
 AGCAGTTCAAACTANCCCATCAAGTTGGTTGCTTCCCTNTTCAAGCACCCCGGGCCCTT
 ATAAAACACTNCGGCGCGGAGCCCTT

FIG. 15GG

14_16475.edi

AGCGTGGTCCGGCCCGAGGTGTTTTATGACGGGCGCGGTGCTGAAGGGCAGGGAAACAAC
 TGATGGTGGTACTTTGAACTGCTTTTCTTTTCTCTTTTGCACAAAGAGTCTCATGCTGA
 TATTTAGACATGATGAGCTTTGTGCAAAAGGGGAGCTGGCTACTTCTCGCTCTGCTTCA7C
 CCACTATTATTTTGGCACAACAGGAAGCTTTGAAAGGAGGATGTTCCCATCTTGGTCACTC
 CTATCGCGATAGAGATGCTGGAAGCCAGAACCATGCCAAATATGTGTCTGTGACTCAGG
 ATCCGTTCTCTGCGATGACATAATATGTGACDATTCAAGAATTAGACTGCCCAACCCAGAA
 ATTCCATTGGAGAAATGTTGTGCACTTCCCAACAGCTCCAACTGCTCTACTCGCCCTCC
 TAATGGTCAAGGACCTCAAGGCCCAAGGGAGATCCAGGCCCTCTGGTATTCTGGGGAG
 AAATGGTGACCTGGTATTCCAGGACAACAGGGTCCCTGGTCTCTGGGCCCTGGGAG
 ATCNGNGAATCATGCCCTACTGGTCTCTAAACTATTCTCCANATGATTGATATGATGTC
 AAGTCTGGGATAGCNAGTANGGANGGACTCCAGGCTATTCTGGACCANACCTGCCGGGG
 GGGCTTCGAAAGCCCCGAATCTGCANANTNCTTCACACTGGCGGCCCTCGAGCTGCTTT
 AAAAGGCCCAATCCNCTTTAGNNGGGGGANTACAATTACTNGCGCGCTTTTANANGC
 CGNNGCTGGGAAAT

15_16476.edi

AGCGTGGTCCGGCCCGAGGTCCAGATCCGCAAGGTCCGAGCCCTGCCGCCATACTCGAA
 CTGGAATCCATCGGTCACTCTCTGCGGGAACAGACATGCTCTTTGTCTTTGGGGTTCTTGC
 TGATGTACCAGTTCTTCTGGGGCACTCTGGGCTGAGTGGGGTACACGCAAGTCTCACCAOT
 CTCCATOTTGCAAGAGACTTTGATGGCACTCAGGTTCCAGCTTGGTTGGGGTCAATCCAG
 TACTCTCACTCTTCCAGTCAGASTGGCACACTTTGAGGTCACGGCAGGTCCGGCCGGGT
 TCTTGGGGCTGCCCTCTCGGCTCCGATOTTCTCGATCTGCTGGCTCAGGCTTTGAGGGTG
 GTCTCCACCTCGAGGTCACGGTCACGAACCACTTGGCATCATCAGCCCGGTAGTAGCGGC
 CACCATCTGAGGCTTCTCTTGANCTGGCTGGGGCAAGCACTGAAGTCGAAACCAAGCCT
 GGGAGGACCAAGGGGACCAANAGGTCCAGCAAGGGCCCGGGGGACCAACAGGACCAAG
 CATCACCAAGTCCGACCCCGGAGAACCTGCCGGGCCCGCCCTCGAA

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TCGAGCCNNGCCCGGGCAGCTCTGGCGCTCCACTCGTGAATGCTGGTCTCTTGGTCCCG
 CCGCCCTCTCTGGACCTCTCTGOTCCCTCTGGTCTCCAGCCCTGGTTTGGACTTCAGCTTC
 CTGCCCCAGCCACCTCAAGAGAAAGCTCAGGATGOTGGCCCTACTACCCCGCTGATGAT
 GCCAATGTGGTCTCTGACCTGAGCTCTGAGGTGACACCCACCTCAAGAGGCTGAGCCAG
 CAGATCGAGAAATCCGGAGCCGAGAGGGCCAGCCGCAAGAACCCCGCCGCACTCTGCGT
 GACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGAATTGACCCCAACCAA
 GGCTGCAACCTGGAATGCCATCAAGCTTCTCTCAATGAGACTGCTGAGACCTGCGTGT
 ACCCCACTCAGCCCACTGTGGCCAGAGAACTGCTACATCAGCAAGAACCCCAAGGACA
 AGAGCCAATGTGTGGTTGGGCAAGCAATGAGGATGCAATTCAGTTCAGATGCGCGCC
 AGGCTTCCACCCCTGCCGATGTGGACCTCTGGCCCGGACCACTT

FIG. 15HH

17_16477.adit

TNGAGCGGGGGGGGGGGCAGGNTGNNAAAGCTGGTCTGTGCTGTCTCTCTGGCAAGGCTG
 GTGAAGATGGTCACCCCTGGAAAACCCGGACGACCTGGTGAGAGAGGAGTTGTTGGACCAC
 AGGGTGCTGGTGGTTTCCCTGGAACTCTGGACTTCTGGCTTCAAAGGCATTAGGGGACA
 CAATGGTCTGGATGGATTGAAGGGACAGCCGGGTGCTCTGGTGTGAAGGTTGAACCTGG
 TGCCCTGGTGAAAATCGAACTCCAGGTCAAACAGGAAGCCGTGGGCTTCTGGTGAAGAG
 AGGACCGTGTGGTGGCTGGCCCTGGCCCANACCTCGCCGGGACCAAGCTAAGCCCGAATTTCC
 AGCACACTGGNGGGCGGTACTANTGGATCCGAGCTCGGTACCAAGCTTGGCGTAATCATG
 GTCATAGCTGTTTCTGNGTGAAAATTGTTATCCGCTEACAATTTACACANCATACGAAGC
 CGGAAAGCATAAAGTGTAAGGCTTGGGGTGCTAATGAGTGAGCTAACTGNCATTAATTT
 GCGTTGGGCTCACTGCCCGCTTTTCCANNNGGGAACCTGCGNTNGCCNGCTTGCNTTAA
 NTGAAATCCGCCNAECCCGGGGAAAAGNCGGTTTGCNGTATTGGGGGCTTTTCTCCTTT
 CCTCGGNTTACTTGANTTANTGGGCTTTGCGNCGNTTGGGTTGNGGGGANGNGGTTCAACN
 TCACNCCAAAGGNGGNAANACCGTTTCCANAAATCCGGGGGNTANCCCAANGNAAAAC
 ATNNGNCVAANGGGCT

18_16477.edic

AGCGTGCTTNGCGGGCGAGGCTCTGGGGCCAGGGCCACCAACAGCTCCTCTCTCACCAGGAA
 GGGCAGGGCTCCTGTGTGACCTGGAGTTCATTTTACCGAGGGGACAGGTTTACCCCTT
 CACACCAGGAGCAGCGGGCTGTCCCTTCAATCCATNCAGACCATTTGTGNCCTTAATGCTT
 TTGAAGCCAGGAAGTCCAGGAATTCAGGGAAGCAGCGAGCACCTGTGGTCCAAACAAC
 TCGTCTCACCAGGCTGGTCCGGCTTTCCAGGGTGACCATCTTCAACAGGCTTCCAGGA
 GCACCAGCAGGACCAAGGCTTACCAAGCTGCCGGGGGGGGGGGGCTCGA

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TCCAGCGGGGGGGGGGGCAGGTCGAATTTCTGCTGAGGGTCCGACTTCTCTCCAATGTTGT
 AGTTCAACCAATTTGCTATGCCAGCATCTAGATGAATCAGATCTGAAATGACCAGTTCCAAA
 GCCTAAGCACTGGCACAACAGTTTAAAGGCTGATTCAGACATTCGTTCCCACTCATCTCCA
 ACGGCATAATGGGAACCTGTGTAGGGGTCAAAGCAGGAGTCATCCGTAGGTTGGTTCAAG
 CTTCTGTTGACAGAGTTGCCCAAGGTAACAAGCTGTTCCGGAACCTTAAGCTCTGCTGGTC
 TTTCACTGCTCCACTATGATGTTGTAGGTGCCAGCTCTGGTGAGGACCTCGGGCCCGGACC
 AGGCT

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AGCGTGGTCCCGGGGGAGGCTCTCACCAGAGGTGCCACCTACAACATCATAGTCCAGGCA
 CTGAAGACCAACAGAGGCATAAGGTTCCGGAAGAGGTTGTTACCGTGGGCAACTCTGTC
 AACGAAGGCTTCAACCAACCTAGGGATGACTGCTGCTTGGACCCCTACACAGTTTCCCAT
 ATGCCGTTGGAGATGAGTGGGAACGAATGCTGAAATCAGGCTTTAAACTGTTGTGCCAGTG
 CTTAGGCTTTGGAAGTGCTCATTTCAAGATGTGATTCTAGATGGTCCCATGACAATGG
 TGTGAACCTACAAGATTGGAGACAAGTGGGACCGTCAAGGAGAAAATGGACCTGCCCGGG
 CCGGGCCCTCGA

FIG. 15II

14_16480.edi

TCGAGCCNNCCCCGGGGCAGGTCCAGTAGTCCCTTCGGGACTCGGTTTCAGCCCCAGGTCTG
 CCGCAGTTGTACAGCCGCCAGCCCGCTGGCCCTCCAAAGCACTGTGCAGGAGCAAAATGGCA
 CCGAGATATTCCTTCTGCCACTGTTCTCTACGTGGTATGTCTTCCCATCATCGTAACACGT
 TCCCTCATGAGGCTCACACTTGAACTTCTCTTTTCGGTTCCCAAGACATGTGCAGCTCATTT
 GGCTGGCTCTATAGTTTGGGGAAAGTTTGTGAAGCTGTGCCACTGACCTTTACTTCTCTCT
 TCTTACTGGAGCTTTCTGTAACCTTCCACTTCTGCTGTTGGTAAATGGTGGATCTTCTATCA
 ATTTCAITGACAGTACCCACTTCTCCAAACATCCAGGGAAATAGTGATTTTCAGAGCGATT
 AGGAGAACCAAAATATGGGGCAGAAATAAGGGGCTTTTCCACAGGTTTCTCTTGGAGGA
 AGATTTCAGTGGTGACTTTAAAGAACTACTCAACAGTGTCTTCA7CCCCATAGCAAAAGAA
 GAAACNGTAAATGATGGGAANGCTTCTGGAGATGCCNNCAATTAAGGGAGNCCCAGAACTT
 CACCATCTACAGGACCTACTTCACTTTACANNAAGNCACATANTCTGACTCANAAAGGAC
 CCAAGTAGCNCCATGGNCAGCACTTTNAGCCTTTCCCTGGGGAAANNTTACNTTCTTAA
 ANCTNGCCNNGACCCCTTAAGNCCAAATNTGGAAAANTTCCNTNCCNCTGGGGGGC
 NGTTNACATGCTNTTNAAGGGCCCCAATTNCCCT

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TCGAGCGGCCCCCGGGGOCAGGTGTCCGAGTCCAGCAGGGAGCGGTGGTCTTGTAGTTGT
 TCTCCGGCTGCCCAATGCTCTCCCACTCCAGCGCGATGTCCCTGGGATAGAAGCCTTTGAC
 CAGGCAGGTACCGCTGACCTCGCTTCTGCTCATCTCTCTCCGGGATGGGGGCAGGCTGTAC
 ACCTGTGGTTCTCGGGCTCGCCCTTTGGCTTTGGAGATGGTTTCTCOATGGGGGCTGGGA
 GGGCTTTGTTGGAGACCTTCCACTTGTACTCTCTCCCAATTCAGCCAGTCTGGTCCAGGAC
 GGTGAGGACGCTGACACACCGGTAGCTGCTGTGTACTGCTCTCTCCCGGGCTTTGTCTTG
 GCATTATGCACCTCCACGGGCTCCAGCTAGCACTTCACTTCACTTCAAGGCTCTTGGTGGC
 TCACCTCCACGACCGCATGTAACTCAGACCTCGGGCGGACCACT

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AGCGTGCTCGCGCGCGAGCTCTGAGCTTACATCCCTGCTGGTGGACCTGAGCCACGAACA
 CCTGAGGTCAAGTTCAACTCTGCTAGCTGGAGCGCGTGGAGGTGCATAATGCCAAGACAAA
 GCGCGGGAGGAGCACTACAAACAGCACTACCGTGTGCTGCTGCTCAGCCTCTCAGCCTCTGCA
 CAGGACTCGCTCAATGGCAACGAGTACAAGTCCAAAGCTCTCCAAACAAGCCCTCCCAAGC
 CCCCATCGAGAAAACCATCTCTCAAGCCAAAGGCGAAGCGCGGAGAACCAACAGGTOTACA
 CCTGCCCCCATCCCGGGAGGAGATACCAAGCAAGCAAGCTCAGCCTGACCTGCTGCTGCA
 AAGCTTCTATCCCAAGGACATCGCGGTGGAGTGGAGAGCAATGGGGACCGCGGAGAAC
 ACTACAAGAACACCGCTCCCTCTCTGACTCCGACACCTGCCCGGGCGGGCGCTCGA

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TCGAGCGCGCGCGCGGGCAGGTTGAATGGCTCTCTGCTGACCAACCGCGGTGCTGCTGGTGG
 GTACAGAGGTCCGATGGGTCAAAACATGGACATAGAGACTGTCCCTGTCCAGGCTGTAGG
 GCGCCAGCTCACTGATCCGTGGGTCAAGTGTGCTCAGCTTCCAGTACAGCGCTCTCTGTG
 CAGTCCAGGGCTTTTGGGGTCAAGGACATGGGTGCAAGACCATCCACTCTGGTGGCTGC
 CCAATCTTCTCAGCGCTCAGCAAGGTGAGTCTGCAACCAAGTACAGAGAGCTGACACT
 GGTGTTCTTGAACAAGGGCATAAAGCAAGCCTGCAAGGACACCTCGGGCGGACCAAGCT

FIG. 15JJ

23_16482.edi

AGCGTGGTGGCGCCCGAGGTGTCTTCAAGGTTGTGTTATGCCCTTGTTCAGAAGACACCAG
 TGTCAGCTCTCTGTACTCTGGTTCCAGACTGACCTTGTCTAGGCCCTGAGAAGGATGGGGCA
 GCCACCAGAGTGGATGCTGTCTGCACCCATCCTCTGACCCCAAAAGCCCTGGACTGGACA
 GAGAGCGGCTGTACTGGAAGGTGAGCCAGCTGACCCACGGCATCACTGAGCTGGGGCCCT
 ACACCTTGGACAGGGACAGTCTCTATGTCAATGOTTTACCCCATCGGAGCTCTGTACCCAC
 CACCAGCACCGGGGTGGTCAOCCAGGAGCCATTCAACTGCCCGGGGGGGCGCTCGA

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AGCGTGGTGGCGCCCGAGGTGTCTTCAAGTGGCACTGGTAGAAGTTCCAGGAACCCCTGA
 ACTGTAAGGGTTCTTCAAGTGGCAAGGATGACATGAAATGATGTACTCAGAAGTGTG
 CTGGAATGGGGCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGTCTTACATTGGCGGGG
 TATGGTCTTGGCTATGCCCTATGGGGGTGCCCCCTTGTGGGGGTGTGGTCCGCCCTAAAC
 CATGTTCTTCAAAAGATCATTTGTGGCCCAACACTGGGTGTCTGACCAGAAAGTGGCAGGAAG
 CTGAATACCATTTCCAAGTGTCTATCCAGGGGTGGGTGACGAAAGGGGTCTTTTGAAGTGTG
 GAAGGAACATCCAAGATCTCTGTGTCATGAAGAATGGGGTGTGGAAGGGTTACCAGTTGG
 GGAAGCTCGTCTGTCTTTTCTCTCCAAATCAGGGGTGCTCTTCTGATTAATCTTCAGGGC
 AATGACATAAAATGTATAATCGGTCCCGGTCCAGGCCAGTAATAGTAAGCTCTGTGACAC
 CAGGGCGGGGGCGAGGGACCTTCTTTCGAAGAGAGCCAGCTTCTCATACTTGATGATGA
 GNCGGTAATCTGTGGCACGTGONGGTTCATGATGCCACCAAGGAAAATGGNCGGGGNG
 GACCTGCCCGGGGGCGGTTCNAAGCCCAATTCACACACTTGGNGGCCCTACTATGGATC
 CCACTCNOTCCAACCTTGGNGGAATAAGCCATAACTTTT

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TCGAGCGCGCGCGCGCGCGAGGTCTTCACTTTTACCAAGTGGGAAGGTGTAATCCGTCT
 CCACAGACAAGGCCAGGACTCGTTGTATCCCTTGAATGATAGAAATGCCGTACTGATGAA
 CAGTTGGGTAGCCAAATCTGCAAGACAGACACTGCAACATTCCGGACACCTTCCAGGAAGC
 GAGAATGCAAGATTCTCTGTGATATCAAGCACTTCAGGTTGTAGATGCTGCCATTGTC
 GAACACCTCTGGATGACCAGCCCAAGGAGAAAGGGGAGATGTTGAGCATGTTCAOCCAO
 CGTGGCTTCCCTGGCTCCCACTTTGTCTCTAGCTTTGAAGACCTCCGGCGGACCAAGCT

37_16487.edi

AGCGTGGTGGCGCCCGAGGTGTCTTCAAGTGGCACTGGTAGAAGTTCCAGGAACCCCTGA
 GTGACCGTGGCTTCCAGCAACTTGGCCACCCAGACCTACACCTGCAACGTAGATCACAAGC
 CCACCAACACCAAGGTGGACAAAGAGATTCAGCCCAATCTTTGTGACAAAATCACAAT
 GCGCACCGTGGCCAGCACCTCAACTCTGTGGGGACCTCACTCTTCTTCCCCCGCAT
 CCGCTTCCAAAAGCTGCCCGGGGGGGGGGGCTCG

FIG. 15KK

33_16487.edit

CGAGCGGCGGCGCGGCGGCGAGGTTTGGAAAGGGGGATGCGGGGGAAGAGGAAGACTGACGGT
CCCCCAGGAGTTCAAGTGCTGGGACGGTGGGCATGTGTGAGTTTGTGACAAAGATTGG
GCTCAACTCTCTTGTCCACCTTGGTGTCTCTGGGCTTGTGATCTACCTTGCAGGTGTAGGTC
TGGGTGCGGAAGTTGCTGGAGGGCACGGTCACCACTGCTGAGGGAGTAGAGTCCTGAG
GACTGTAGGACAGACCTCGGCGCGGACCACT

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NGGNNGGTCCGONCNGNCAGGACCACTCTCTTCGAAATA

41_16489.edit

AGCGTGCTCGCGGCGGAGGTCTCACTTCCCTCCGCAAGCACCGATAGCTGCGCTCTGG
AAGCCGAGATCTCTTTAAAGTCTTGAGCAATTTCTCGCACCAAGAGCTGGAAAGGGAAGTT
TGCGAATCAGAAGTTCAGTGGACTTCTGATAACGTCTAATTTCACCGAGCGCCACAGTACC
AGGACCTGCGCGGCGCGGCGGCTCGA

43_16489.edit

TGGAGCGGCGGCGGCGGCGGAGGTCTCTGTAAGTNGCGGCTCCGTGAAATTACAGCTTATCA
GAAGTCCACTGAACTTCTGAATCGGAAAGTTCCTTCCAGCGTCTGGTCCGAGAAATTGCT
CAGGACTTTAAAAGAGATCTGCGCTTCCAGAGCGCAAGCTATCGGTCTTTCAGGAGGCA
AGTGAAGACCTCGGCGGCGGAGCACT

45_16491.edit

TGGAGCGGCGGCGGCGGCGGAGGTCTCAATCGGCGGCTCCGAGCTTTCGCGCGGATACTCG
AACTGGAATCCATCGGTCTATGCTCTCGGCGAACCAGAGATGCTTCTTGTCTTGGGGTTCT
TGCTGATGTACCACTTCTTCTCGGCGCACTGGGCTGAGTGGGTACAGCGAGGTCTCACC
AGTCTCCATGTTGCAGAAGACTTTGATGGCATCCAGTTCCAGGCTTGGTTCGGGTCAATC
CAGTACTCTCCACTCTTCCAGTCAAGTGGCACATCTTGAGGTCACCGCAGGTCCGGGCGG
GGTTCTTGACCTCGGCGGCGGAGCACT

FIG. 15LL

46_16491.edjt

GTGGGNTTGAACCCNTTTNANCTCCGCTTGGTACCGAGCTGGGATCCACTAGTAACCGCCG
 CCACTGTGCTGGAAITCGGCTTAGCGTGGTCCGGCCGAGGTCAAGAACCCCGCCGAC
 CTCCCGTGACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCC
 CAACCAAGGCTGCAACCTGGATGCCATCAAGTCTTCTCCAACATGGAGACTGGTGAGAC
 CTGGCTGTACCCCACTCAGCCCACTGTGTGGCCGAGAAGAACTGGTACATCAGCAAGAACCC
 CAAGGACAAGAAGCATGTCTGTTCGGCCGAGAGCATGACCGATGGATTCCAGTTGAGTA
 TGGCGGCCAGGGCTCCGACCTGCCGATGTGGACCTGCCCGGGCGGCCCTCGA

47_16492.edjt

AGCGTGGTCCCGGCCGAGGCTGTGGGATGCTCCTGCTGTACAGTGAGATATTACAGGATC
 ACTTACCGAGAAACAGGAGGAAATAGCCCTGTCCAGGAGTTCAGTGTGCTGGGAGCAAG
 TCTACAGCTACCATCAACCGCCCTTAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
 TCACTGGCCGTGGAGACACCCCGCCAAAGCAAGCCAAITTCATTAAATTACCGAACAG
 AAATTGACAAACCATCCAGATGCCAGTACCAGATGTTCCAGGACAACAGCAATTAGTGTCA
 AGTGGCTGCTTCAAGTTCCCTGTACTGTTACAGAGTAACCACTCCCAAAAATGG
 ACCAGGACCAACAAAACTAAAAGTCCAGGTCCAGATCAAAACAGAAATGACTATTGAAG
 GCTTCCAGCCCAAGTGGAGTATGTGGTTAAGTGTCTATGCTCAGAAATCCAGCGGAGAG
 AAGTCAGCCTCTCTGTTCAAGCTGNAAGTAACCAATATGATCCCTAAAGGACTGGCAATC
 ACTGATGNGGATCCCGATTCCATCAAAATTENTTGGGAAAACCCACAGGGGCCAAGTTTC
 ANGTGAGGNGGACCTACTGAGCCCTGAGGATGGAAATCCTTGACTNTTCTTNNCTGAT
 GGGCAAAAAAAGCTTNAAGATTGAAGGACCTCCCGGGCGCCGTNCAAAACCCAAAT
 CCACCCCTTGGCGGCTTCTATGGGNGCCACTCCGACCAAACTTGGGGTAA

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TCCAGCGGCCCGCCCGCCAGGTCTTCCAGCTCTCCAGTGTCTCTTCCACCATCAGGTGCA
 GCGAATAGCTCATGGATTCCATCTCTCAGGCTCCAGTAGGTCAACCTGTACCTGCAAACTT
 GCCCTGTGGGCTTCCCAAGCAATTTCTATGGAATCGGCAATCAGATCAAGTGAATCCCA
 TCTTACGGGCAATCAATGTTGTTACTCCAGTCTGAACCAAGAGGCTGACTCTCTCCGCT
 CGATCTGAGCAATAGACACTAACCACTACTCCACTGTGGGCTGCAACCCCTCAATAGTCA
 TTTCTTTTGTATCTCGACCTCCAGCTTTACTTTTGTGTTGTTCTCTGGTCCATTTTGGGAGTG
 GTGGTACTCTGTAAACCAAGTAACACCGGGAATTTGAAGGAGCCACTTGACACTAATGCTGT
 TOTCTGAAACATCCGTCCTTCCATCTCGGATGCTTTCTCAATTTCTGTTCCGTAAATTATG
 GAAATGCGTTTCTCTCTTCCGGGCTTGTCTCCAGGCCAGTGACAGCATACACAGTGATG
 GTATAATCAACTCCAGGTTTAAGCCGCTGATGGTAAGTGAATCTTCTCCAGGCCACAAGT
 GAACTCTGACAGGCTATTTCTCTCTCTCTCCGTAAGTGAATCTGTAAATATCTCACTGGG
 ACAGCAAGGAGGATTCAAAAGTTCGGGCCGACCCCTAAGCCGAATTTNGCAATATNC
 ATCACTCTGGCGGGGCTCGANDATTCATTAAGGCCCAATCNCCTATAGGGAGTNT
 ANTACAATTG

FIG. 15MM

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TGGAGCGGCGCGCCCGGGCAGGTCACTTTTGGTTTTTGGTCAITGTTGGGTTGGTCAAAGATA
 AAAACTAAGTTTGAGAGATGAATGCCAAAGGAAAAAATATTTTCCAAAGTCCATGTGAAA
 TTGTCTCCCATTTTTTGGCTTTTGAGGGGGTTTCAGTTTGGGTTGCTTGTCTGTTTTCCGGGT
 GGGGGGAAAGTTGCTTGGGTGGGAGGGCAGCCAGGTTGGCA TGGAGGCAGTTTACAGGAA
 GCAGACAGGGCCAACGTCT

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AGCGTGCTCGCGGCGCGAGGTCTCACCAGAGGTGCCACCTACAACATCATAGTGGAGGCA
 CTGAAAGACCAGCAGACGATGAATGCCAAAGGAGGTTGTTACCGTGGGCAACTCTGTCTC
 AACGAAGGCTTGAACCAACCTACCGGATGAATCGTGGCTTTGACCCCTACACAGTTTCCCAT
 ATCCCGTTGGAGATGAGTGGGAACGAATGTCTGAATCAAGGCTTAAACGTGTTGTGCCAGTG
 CTTACGCTTTGGAAAGTGGTCAATTCAGATGTGATTCATCTAGATGGTGGCATGACAATGGT
 GTGAAGTACAGATTGGAGAGAAAGTGGGACCGTCAGGGAGAAAAATGGACCTGCCCCGGC
 GGCCGCTCGA

36_16496.edit

TGGAGCGGCGCGCGCGCGAGGTCTCATTCTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGT
 AGTTACACCACTTGTCTATGCCACCATCTAGATGAATCAGATCTGAAATGACCACTTCCAAA
 GCCTAAGCACTGGCACAACAGTTTAAAGGCTGATTCAGACA TCGTTCCCACTCATCTCCA
 ACGGCATAATGGGAAAGTGTGTACGGGTCTAAAGCAGGATCTCGTAGCTTGGTTCAAG
 CCTTCGTTGACACAGTTTCCCAAGGTAAGCAAGCTCTTCCCAAGCTTA TCCCTCTGCTGGT
 TTTCACTGCTCTCACTATGATGTTGTAGCTGGCACCTCTGCTGAGGACCTCGCCCGCGGACC
 ACGCT

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TGGAGCGGCGCGCGCGCGAGGTCTCATAAAGTCTCTGATACAACCACCGGATGAGCTCTCA
 GGAGCAAGGTTGATTTCTTTCA TGGTCCCGCTCTTCTCTTGGGGGTCAACCCCACTCGATA
 TCCAGTGAGCTGAACATTCGCTGTCTCTCACTGGCGCTCAAGGCTTGTGGGTGTGACCTGA
 GTGAACCTCAGGTCACTTGGTGGAGGAA TACTGCTTACTGAGTCTGAACCAGAGGCTGA
 CTCTCTCCGCTTGGATTCTGAGCATAGACACTAACCACATACTCCACTGTGCGGTGCAAGC
 CTTCAATAGTCAATTTCTGTTTGAATCTGGACCTGCACTTTTACTTTTGTGCTCTGCTCCAT
 TTTTGGGAGTGGTCTTACTCTGTAACTGTAACAGGGAAGTTGAAAGGCAGGCACTTGGAC
 ACTAATCTGTTGTCTGAAACATCGGCTCACTTGCATCTGGGATGGTTTGNCAATTTCTGTTT
 GGTAA TAAATCGAATAAGGCTTCTCTCTTCCCGGCTGTCTGCAAGGCGGCACTGACAGCATA
 CACAONGATCGNATNATCAACTCCAAGTTTAAAGCCCTGATGGTAAGTTTAAACTTGGCTCC
 CAGCCAGNGAACTTCCGGACAGGGTA TTTCTCTGCTTTTCCGAAAGNGANCCTGGAATNN
 TCTCTTGGANCAAGAAGGANCNTCCAAAAGTTGCCCCGGAACCCCTT

FIG. 15.VV

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AGCGTGCTCCCGGCEGAGGTCTGTGACAGTGGCACTGGTAGAAGTTCCAGGAACECTGA
 ACTGTAAGCGTCTTCATCACTGCCAACAGGATGACATGAAATGATGTACTCAGAAAGTGTG
 CTGGAAATGGCGCCCATGAGATGGTTGTGTGAGAGAGAGCTTCTGTCTACATTGGGCGGG
 TATGGTCTTGGGCTATOCCTTATGGGGGTGGCGCTTGTGGGCGGTGTGGTCCGCTAAAAC
 CATGTTCTCAAAGATCATTTTGTGCCCCAACACTGGGTTGCTGACCAGAAAGTGGCAGGAAG
 CTGAAATACCATTTCCAATGTGCATACCCAGGGTGGGTGACGAAAGGGGTCTTTTGAAGTGTG
 GAAGGAACATCCAAGATCTCTGGTCCATGAAGATTGGGCTGTGGAAGGGTTACCAATTTGG
 GGAAGCTCGTCTGTCTTTTCCCTTCCAATCAGGGGCTCGCTCTTCTGATTATTTCTTCAGGGC
 AATGACATAAAATTGTATATTCGGTTCCGGTTCAGGGCAGTAATAGTAGCCTCTTGTGAC
 ACCAGGCGGGGGCCANGGACCACTTCTCTGGGANGAGACCCAGCTTCTCA7ACTTGTATGAT
 GTAACCGGTAATCTGTGACGTGGCGGCTGNCATGATACCANCAAGGAATTGGGTGNGN
 GGACCTGCCCGGGCGGCGCTCNA

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AGCGTGCTCCCGGCEGAGGTCTGTGAGTGGTCTGTGTCACAGTGAATATTACAGGATC
 ACTTACGGAGAAAACAGGAGGAAA7AGCCCTGTGCCAGGAGTTCACTGTGCTGGAGCAAG
 TCTACAGCTACCATCAGCGGCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
 TCACTGGCGGTGGAGACAGCGCGGCAAGCAGCAAGCCAAATTTCCATTAAATACCGAACAG
 AAATTCACAAACCA7CCCAATGCAAGTGAACCAATTTCAAGGACAACAGCA7TAGTGTCA
 AGTGGCTGGCTTCAAGTTGGCGTCTTACTGGTTACAGACTAACCACTCCCAAAA7GG
 ACCAGGACCAACAAA7ACTAAA7CTCCAGCTCCAGATCAAA7CAGAAA7GACTATTGAAG
 GCTTGCAGCCCAAGTGGAGCTATGTGCTTACTGTCTATGCTCAGAA7CCAAGCGGAGAGA
 GTCAGGCTCTGCTTCAGACTCCAGTAACCACTATTCCTGCACCAACTGACCTGAAGTTCACT
 TCAGGTCAAGCTACAAAGCTGAGCGGCAAGTGGACACCAACCAATGTTCAGTCACTGAT
 ATCGAGTGGCGGTGAGGCGGCAAGGAGAAAGACCGGACCCATGAAAGAAA7CAACCTTCT
 CCTGACAGCTCATGGGCGGCTGTATGAGACTTATGGGGGACTGCCCCGGCGGCGGCGT
 GAAANGGAATTNTGAAATTTCCCTTNCAGTGGCGGCGGCGTTCAGGCTTNTTANANGGC
 CGAATTGNCCTNTAANGGCTCTN

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AGCGTGCTCCCGGCEGAGGTCTGAGGAA

62_16483.adit

TCCAGCCCCCGCCCCCGGAGGTCCACTACACCAATTCCTTCTGCTATCA7GGCAGCGGG
 CAGGTGCCAGGAATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCTCCCAAGAGA
 AGTGGTCCCTCGCCCCCGGCTGTGTGTACAGAGGCTACTATTACTGGGCTGGAACCGGGA
 ACCGAATATACAA7TTATGTCA7TGGCTTGAAGAATAATCAGAAAGAGCGGAGCGGCTGATTG
 GAAGGAAA7AGACAGAGGAGCTTCCCAACTGCTAACCCCTCCAGACCCCAATCTTTCATG
 GACCAAGATCTTGGATCTTCTTCCAGCTTCAAAAGACCCCTTTGCTCAGCCACCCCTGG
 CTATGACACTCCAAATGGTATTCAGCTTCTGGCACTTCTGCTCAGCAACCCAGTGTGGG
 CAACAAATGATCTTTGACGAACATGGTTT7TAGCGGACCAACCGGCCCAACGGGGCAAC
 CCCATAAGGNATAAGCCCAAGACCATACCCCGCGGAATGTAGGACAAGAAAGCTCTNCTCA
 ACAACCATCTCATGCCCCCAATCCAGGACACTTCTGAGTACATCA7TTGATGTCA7CCTG
 GTGGGCACTTGA7CAANAACCCCTTACAGTTCAAGGTTCTGGAACCTTCAACCAONGGCACT
 TCTGACAGGANCTTGGCGGNGACCACT

FIG. 1500

63_16500.edit

AGCGTGGTGGCGGCGGAGGTCCATTTCCTCCCTGACGGTCCCACTTCTCTCCAATCTTGTAG
TTCACACCATGTGTCATGGCACCATCTAGATGAATCACAATCTGAAATGACCACTTCGAAAGC
CTAAGCACTGGCACAACAGTTTAAAGCCTGATTGAGACATTCGTTCCCACTCATCTCCAAC
GGCATAATGGGAAACTGTGTAGGGGTCAAAGCAGGATCATCCGTAGGTTGGTTCAAGCC
TTCGTTGACAGAGTTGCCCAACGGTAACAACCTCTTCCCGAACCTTATGCCCTCTGCTGGTCTT
TCAGTGCCTCCACTATGATGTTGTAGGTGGCACCTCTGGTGAGGACCTGCCCGGGCGGCGCC
GCTCGA

64_16493.edit

AGCGTGGTGGCGGCGGAGGTGTGCCCCAGACCAGGAATTCGGCTTCGACGTTGGCCCTGTC
TGCTTCCTGTAAACTCCCTCGATCCCAACCTGGCTCCCTCCCAACCAACTTTCCCCCC
AACCCGGAACAGACAAGCAACCCAACTGAACCCCTCAAAAAGCAAAAAAATGGGAG
ACAATTTACATGGACTTTGGAAAATATTTTTTCTTTCGATTTCATCTCTCAAACTTAGTT
TTTATCTTTGACCAACCGAACATGACCAAAAACCAAAAGTACCTGCCCGGGCGGCGCTC
GA

64_16500.edit

TCCAGCGGCGGCGGCGGAGGTCTCAGAGAGGTGCCACCTACACATCATACTGGAGG
CACTGAAAGACCAGCAGAGGCCATAGGTTTCGGGAAGAGGTTGTTACCGTGGGCAACTCTG
TCAACGAAGGCTTGAACCAACCTACCGATGACTCGTCTTTGACCCCTACACACTTTCCCA
TTATGCCGTTGGAGATGAGTGGCAACGAATGTGTGAATCAGGCTTTAAACTGTTGTCCAG
TGCTTAGGCTTTGGAAGTGGTCATTCAGATGTGATTCATCTAGATGGTGGCAATGACAATG
GTGTGAACCTACAGATTGGAGAGCACTGGGACCGTCAGGAGAGAAATGGACCTCGGCGG
CGACCACTCT

FIG. 15PP

16501.1.edit

TGGAGCGGGCGGGCGGGCAGGTACGGGGGTGGTCAGCGAGGAGCCATTTCAGACTGAACTT
 CACCATCAACAACCTGGCGTATGAGGAGAAATGCAAGCACCTGGGTCCAGGAAGTTCAA
 CACCACGGAGAGGGTCTTCAGGGCGCTGCTCAGGTCCCTGTTCAAGAGCACCACTGTTGGC
 CCTCTGTACTCTGGCTGCAGACTGACTTTGCTCAGACCTGAGAAACATGGGGCAGGCCACTG
 GAGTGGACGCCATCTGCACCGTCCGGCTTGATCCCACTGGTNCCTGGACTGGACANANAGCG
 GCTATACTTGGAGCTGANCENAACTTTGGCGGNGACNCCNCTT

16501.2.edit

GAGGACTGGCTCAGCTCCCACTATAGCCGCTCTCTGTCCAGTCCAGGACCAGTGGGATCAA
 GCGGGAGGGTGCAGATGGCGTCCACTCCAGTGGCTGCCCATGTTTCTCAAGTCTGAGCAA
 AGNCAGTCTCCAGCCAGAGTACAGAGGGCCAACTGGTGGCTCTTGAACAGGGACCTGAG
 CAGGCCCTGAAGGACCTCTCCGTGGTGTGACTTCTGGAGCCAGGGTGGCTGCATGTTT
 TCTCATACCGCAGGTTGTTGATGGTGAAGTTCACTGTGAATGGCTCCTCGCTGACCACCC

16502.1.edit

AGCGTGGTCCCGGGCGGAGGTCCACCCACCCCAATTGCTTGGTGGTATCATGGCAGCCCGCA
 CGTCCAGGATTACGGGCTACATCATCAAGTATGAAAGCCCTGGGTCTCTCTCCAGAGAA
 GTGCTCCCTCGGGCCCGGGCTGGTGTCAAGAGGCTACTATTACTGGCTGGAAACCGGAA
 CCGAATATACAATTTATGTCATTGGCTGAAAGATAATCAGAAAGCGGAGCCCTGTGATTGG
 AACGAAAGAGACAGACGAGGTTCCCAACTGGTAACCTTCCACAGCCCAATCTTCATGG
 ACCANANANCTTGGATNGTCTTTCACTNGGTTNAAAAAGCCTTATGGCCCCCCCCACCTTG
 GGGATTAACTTGGGAAANGGGGAATTNACCTTCC

16502.2.edit

TGGAGCGGGCGGGCGGGCAGGTCTCTCAGAGTGGCACTGGTAGAAGTTCCAGGAACCTT
 GAAGTGTAAAGGCTTCTTCATCAGTGGCAACAGGATGACATGAATGATGTACTCAGAAAGT
 GTCTTGGAAATGGGGCCCATGAGATGCTTGTCTGAGAGAGAGCTTCTTGTCTTACATTCCGGC
 GGGTATGGTCTTGGCTATGCTTATGGGGGTGGCGTTCTTGGGGCGGTGTGGTCCGGCTAA
 AACCATGTTCTCAAAAGATCAATTTGTTGCCCAACACTGGCTTGGTGGACAGAACTGCCAGG
 AAGCTGAATACCATTTCCAGTGTCACTCCAGGCGGGGTGACCAAAGGGCGGTCTTTNCA
 CCTGGNGAAGGAAACCATGCAAAANCTCTGNCCTATG

FIG. 150Q

16503.1.edi:

AGCGTGCGCGCGCGGAGGTCTGAGGATGTAACTCTTCCAGGGGAAGGCTGAAOTGCT
GACCATGGTGCTACTGGGTCCCTTCTGAGTCAGATATGTGACTGATGNGAACTGAAGTAGGT
ACTGTAGATGGTGAAGTCTGGGTGTCCCTAAATGCTGCATCTCCAGAGCCTTCCATCATT
CCCTTTCTTCTTTTCTATGGGATGAGACACTGTTCAGTATTCTCTAAAGTCACCACTGAAA
TCTTCTCCAAAGGAAAGCTGTGGAAAAGCCCTTATTCTGCCCCATAATTGGTTCTCC
TAATCCTCTGAAATCACTATTTCCTGGAAAGTTTGGAAAAANNGGCGNACCTGNCAN
TGGAAANTGGATANAAAGATCCCACCATTTCACCCAAACNAGCAGAAAGTGGGAANGGTAC
CGAAAAGCTCCAAGTAANAAAAAGCAGGGAAGTAAAGGTCAAAGTGGGCACCAGTTTCAA
ACAAAACCTTTCCCCAACTATANAACCCA

16503.2.edi:

AAGCGCGCGCGCGCGGAGGNNCAGNAGTGCCTTCCGGACTGGGNTCACCCCAGGTCTGC
GGCAGTTGTACAGCGCGCAGCCCCGCTGGCTCCAAAGCATGTGCAGGAGCAAATGGCAC
CGAGATATTCCTTCTGCCACTGTTCCTCTACGTGGTATGTCTTCCCATCATCGTAACACGT
CCCTCATGAGGGTCACTTGAATTCTCTTTCCTTCCCAAGACATGTGCAGCTCAATTG
GCTGGCTCTATAGTTTGGGGAAAGTTTGTGA.AACTGTGCCACTGACCTTACTTCTCTCT
CTCTACTGGAGCTTTCCTTACCTTCCACTTCTGCTGNTGONAAAAAGGGNGGAACNTCTTA
TCAATTTGATTGACAGTANCCCNCTTCTNCCCAAACA.TNCAAAGGAAAAATATTGATTN
CNAGAGCGGATTAAGGAACA.ACCCNAAATTATCGGGGCCAGAAATAAAAGGGGCTTTTCCA
CAGGTNTTTTCT

16504.1.edi:

TCGAGCGCGCGCGCGCGGAGGTCTGCAGGCTATTGTAAAGTGTCTGAGCACATATGAGAT
AACCTGGGCCAAAGCTATGATGTTGGATACGTTAGGTGTATTAAATGCCACTTTTGACTGCCA
TCTCAGTGGATGACAGCCTTCTCACTGACAGCAGACATCTTCTCACTGTGCTAGTGGGCA
CGAGAAAGAGACATGCTGCCACTGCACTTCCGCGCGGACCAAGCT

16504.2.edi:

AGCGTGCTCGCGCGCGGAGGTCCAUTCCAGCATGCTCTTCTCTCTGCCCCACTGCCACAGTG
AGGAAGATCTCTGCTGTCACTGAGAAAGGCTGTCACTCCACTGAGATGGCAUTCAAAGTGC
ATTAAATACACCTAACGTATCGAACAATCA.TAGCTTGGCCCCAGGTTATCTCATATGTGCTCA
GAACACTTAC.ATAGCCTGCAGACCTGCGCGCGCGCGGCTCGA

FIG. 15RR

16505.1.edit

CGAGCGGGCGCCCGGGCAAGGTCCAGACTCCAATCCAGAGAACCACCAAGCCAGATGTCAG
 AAGCTACACCATCACAGGTTTACAACCAAGGCACTGACTACAAGATCTACCTGTACACCTTG
 AATGACAAATGCTCGGAGCTCCCTGTGGTCAATGACGCTTCCACTGCCATTGATGCACCAT
 CCAACCTGCGTTTCTGGCCACCACACCAATTTCCTTGGTATCATGGCAGCCGCCAGG
 TCCCAGGATTACCGGCTACATCATCAAGTATGAGAAAGCTGGGTCTCCTCCAGAGAAGT
 GGTCCCTCGGGCCCCCGCCCTGGTGNACAGAAAGCTACTATTACTGGCCTGGAACCGGGAACC
 GAATATACAATTTATGTCAATTGCCCTGAAGAATAATCANAAGAGCGAGCCCTGATTGGA
 AGG

16505.2.edit

AGCGTGGTCCGGGCCCCAGGTCCTGTGAGAGTGGCACTGGTAGAAGTTCCAAGAACCCCTGA
 ACTGTAAGGGTTCTTCATCAGTGCCAAACAGGATGACATGAAATGATGTACTCAGAAAGTGTG
 CTGGAATGGGGCCCCATGAGATGGTGTCTGAGAGAGAGCTTCTTGTCTGTCTTTTTCCTTC
 CAATCAGGGGCTCGCTCTTCTGATTATTCTTCAGGGCAATGACATAAAATTGTATATTGGTT
 CCGGTTCCAGGCCAGTAATAGTAGCCTCTGTGACACCAGGGCGGGGGCCGAGGGAGCCACT
 TCTCTGGAGGAGACCCAGGCTTCTCACTTGTATGATGTANCCGGTAATCCTGGCACCGT
 GCGCGCTGCCATGATACCAAGCAAGGAATTGGGTGTGGTGGCCAAAGAAACGCAAGTTGGAT
 GGTGCATCAATGGCAGTGGAGGCGGTGATNACCACAGGGAGCTCCGANCATTGTCAATC
 AAGGTGGACAGGTAGAAATCTTGTATCAGGTCCCTGGTTTGTAAACCTG

16506.1.edit

TGGAGCGGGCGCCCGGGCAAGTTTCTGTACCGTQACCTGGAGGTGGACACCCCTCAAG
 AGCCTGAGCCAGCAGATCGAGAACATCGGAGCTCAGAGGGCAGCCGCAAGAACCCCGC
 CCGCACCTGCCCTGACSTCAAGATGTCCCACTGTGACTGGAAGAGTGGAGAGTACTGCAAT
 TGACCCCAAGCAAGGCTGCAACCTGGATGCCATCAAAATCTTCTGCAACATGGAGACTGCT
 GAGACCTGCTGTACCCCACTCAGCCCACTGTGGCCCAAGAAAGAACTGGTACATCAGCAAG
 AACCCCAAGGACAACAAGCATGTCTGCTGGGGGAAGCATGACCCATGGATTCCAGTTC
 GAGTATGGCGGCCAAGGCTCTGCACTCTCCGATGTGGACCTCGGCCCGGACCAAGCTAAG
 CCGCAATTCCAGCAACTGCGCGCCCTTACTACTGGCATCCGAGCTTCCGTACCAAGCTTG
 GCGTAATCATGGGNCATACCTGTTTCTGNGTGAATAATGCTATTCCCGTTACAAATTTCC
 AC

16506.2.edit

AGCGTGGTCCGGGCCCCAGGTCCTGTGAGAGTGGCACTGGTAGAAGTTCCAAGAACCCCTGA
 CTGGAATGCCATGCTCATGCTCTGCGGCAACCAGACATGCTCTTGTCTTGGGGTTCTTGC
 TGATGTACCACTTCTTCTGGGCAACTGCGCTGAGTGGGTACACCGAGGTCTCACCAGT
 CTCCATGTTTCCAGAAAGACTTGAATGGCATCCAGGTTCCAGCCTTGGTTGGGOTCAATCCAG
 TACTCTCCACTCTTCCAGTCAAGATGGCACTCTTGAGGTACCGCAGGTGCGGCGCGGGT
 TCTTGGCGCTGCGCTCTGGGCTCCGATGTTCTGATCTGCTGGCTCAAGCTCTTGAAGGGT
 GGTGTCCACCTCGAGGTCACGCTCAGCAACCTGCGCGGCGCGGCGGCTCGA

FIG. 15SS

16509.1.edir

AGCGTGGTCCCGGCGGAGGTCTGGGATGCTCCTGCTGTCACAGTGAGATATTACAGGATC
 ACTTACGGAGAAACAGGAGGAAATAGCCCTGTCCAGGAGTTCACTGTGCTTGGGAGCAAG
 TCTACAGCTACCATCAGCGGCTTAAGCTGGAGTTGATTATACCATCACTGTGTATGCTG
 TCACTGGCGGTGGAGACAGCCCGCAAGCACCAAGCCAAATTTCCATTAAATTACCGAACAG
 AAATTGACAAACCATCCAGATGCAAGTGAACCGATGTTGAGGACAACAGCATTAGTGTCA
 AGTGGCTGCCCTTCAAGTTCCTCTGTTACTGGTTACAGAAAGTAACCACCCTCCCAAAAATG
 GACCAAGACCAACAAAACTAAAACTGCGAGTCCAGATCAAAACAGAAAAATGACTATTG
 AAGGCTTGACGCCACAGTGGAAAGTATGTGGNTAGGNGTCTATGCTCAGAAATCCCAAGCC
 GGAGAAAGTCAGCCTTCTGCTTTAGACTGCAGTAACCAACATTGATCGCCCTAAAGGACT
 GGNCATTCACTTGGATGCTGGATGTCCAATC

16509.2.edir

TCGAGCGGCGCGCGGCGGAGGTCTTGCAGCTCTGCAGNGTCTTCTTCACCATCAGGTGCA
 GCGAATAGCTCATGGATTCCATCGCTCAGGCTCGAGTAGGTACCCCTGTACCTGGAAACTT
 GCGCCTGTGGCTTTTCCCAAGCAATTTTGATGGAAATCGACATCCACATCAGNGAATGCCAG
 TCCTTTAGGGCGATCAATGTTGCTTACTGCAGTCTGAACCCAGAGGCTGACTCTCTCGGCTT
 GGATTTGAGCATAGACACTAAGCACATACTCCACTGTGGGCTGCAAGCCTTCAATAGTCA
 TTTCTGTTTGATCTGGACCTCCAGTTTAAAGTTTGGTGGTCTGNCCTGNCCTTTTGGGAAG
 TGGGGGGTTACTCTGTAAACAGTAACAGCGGGAAGTTGAAGGCAGCCACTTGACACTAATG
 CTGTTGCTCTCAACATCGCTCACTTGAATCTGGGATGGTTTGAACAATTTCTGCTTGGCA
 AATTAATGGAATTTGGCTTCTGCTTGGCGGCGCTGNCCTCCAGCGGCGCACTGACAGCATA
 C

16510.1.edir

TCGAGCGGCGCGCGGCGGAGGTCTTGCAGCTCTGCAGNGTCTTCTTCACCATCAGGTGCA
 GCGAATAGCTCATGGATTCCATCGCTCAGGCTCGAGTAGGTACCCCTGTACCTGGAAACTT
 GCGCCTGTGGCTTTTCCCAAGCAATTTTGATGGAAATCGACATCCACATCAOTGAATGCCAG
 TCCTTTAGGGCGATCAATGTTGCTTACTGCAGTCTGAACCCAGAGGCTGACTCTCTCGGCTT
 GGATTTGAGCATAGACACTAAGCACATACTCCACTGTGGGCTGCAAGCCTTCAATAGTCA
 TTTCTGTTTGATCTGGACCTCCAGTTTAAAGTTTGGTGGTCTGNCCTGNCCTTTTGGGGAAG
 GGGGTGCTTACTCTGTAAACAGTAACAGCGGGAAGTTGAAGGCAGCCACTTGACACTAATG
 CTGCTGGCCTGAACATCGGCTCACTTGAATCTGGGATGGTTTGGTCAATTTCTGTTGGTAAT
 TAATGGGAATTTGGCTTACTGGCTTGGCGGCGCTGTCTCCAGCGGNCAGTGACAAACATAC
 ACAGGNGATGGGTATAATCAACTCCAGCTTTAAGGCCNCTGATGGA

16510.2.edir

AGCGTGGTCCCGGCGGAGGTCTGGGATGCTCCTGCTGTCACAGTGAGATATTACAGGATC
 ACTTACGGAGAAACAGGAGGAAATAGCCCTGTCCAGGAGTTCACTGTGCTTGGGAGCAAG
 TCTACAGCTACCATCAGCGGCTTAAGCTGGAGTTGATTATACCATCACTGTGTATGCTG
 TCACTGGCGGTGGAGACAGCCCGCAAGCACCAAGCCAAATTTCCATTAAATTACCGAACAG
 AAATTGACAAACCATCCAGATGCAAGTGAACCGATGTTGAGGACAACAGCATTAGTGTCA
 AGTGGCTGCCCTTCAAGTTCCTCTGTTACTGGTTACAGAAAGTAACCACCCTCCCAAAAATG
 GACCAAGACCAACAAAACTAAAACTGCGAGTCCAGATCAAAACAGAAATGACTATTG
 AAGGCTTGACGCCACAGTGGAGTAATGTGGNTAGGNGTCTATGCTCAGAAATCCCAAGCC
 AGAGAGTCAGCCTTCTGCTTCAAGT

FIG. 15UU

16511.1.edit

TCGAGCGGGCCCCCGGGCAGGTCAGCGCTCTCAGGACGTCAACACCATGGCCCTGGGCTCT
 GTCCTCTCTCAGCGCTCTCTACTCAGGGCACAGGGTCTGGGCCCCAGTCTGCCCTGACTCAG
 CCTCCCTCCGGCTCCGGGTCTCTCTGGACAGTCACTCACCATCTCTCTGCACGTGGAACCAACA
 CTGACGTTGGTGTCTTATGAATTTGTCTCTCTGGTACCAACAACACCCAGGCAAGGCCCCCAA
 ACTCATGATTTCTGAGGTCACTAAGCGGCCCTCAGGGGTCTCTGATCGCTTCTCTGGCTCC
 AAGTCTGGGAACACGGGCTCTCTGACCGTCTCTCTGGGTCTCCANGCTGAGGATGANGCTGATT
 ATTACTGGAAAGCTCATATGCCAGGCAACAACAATTGGGTGTTGGCGGAAGGGACCAAGCT
 GACCGTCTAAGGTCAAGGCCAAGGCTTCCCCCTCGGTCACTCTGTTCCACCCCTCTCT
 GAAGAAGCTTTCAGGCCAACAANGNCACACTGGGTGTGTCTCTATAAGTGGACTTCTACCC

16511.2.edit

AGCGTGGTCCGCCCCGAGGTCTGTAGCTTCTGTGGGACTTCCACTGCTCAGGCGTCAGGCT
 CAGGTAGCTGCTGGCCCGGTACTTGTCTTCTCTTCTGNTTGGAGGGTGTGGTGGTCTCCACT
 CCGGCTTGACGGGCTGCTATCTGCTTCCAGGCCACTCTCAGGCTCTCCGGGTAGAAAT
 CACTTATGAGACACACCAAGTGTGGGCTTGTGGCTTGAAGTCTCTCAGAGGAGGCTGGGA
 ACAGAGTGACCGAGCGGCGCACGCTTGGGCTGACCTAGGACGCTCAGCTTGGTCTCTCCG
 CGAACACCCAAATTGTTGTTGCTTGCATATGAGGTGACGTAATAATCAGCCTCATCTCAGC
 CTGGAGCCCGAGAGACNGTCAAGGGAGGCTCGTGTGTTGCCAAGACTTGGAAAGCCACANAAG
 CGATCAGGGAGCCCTGAGGCGCGCTTTAGNGACCTCAAAAAATCATGAATTTGGGGGGCC
 TTTGCTTGGGNGTTGGTGGTACCGACNAAGAAATTTTCATAAAGCACCAACGTCCT
 GCTGGTTTCCAGTGCAANGAANATGGTGAAGTGAANTGTC

16512.1.edit

AGCGTGGTCCGCCCCGAGGTCTCAGCATCAGGAGCCCCGCTTCCCGGCTCTGGTCTATCCCC
 TTTCTTTTGTGGCTGAAACCAATGTCATCAATTCGAGTAGCAGAACTGCGGTCTCTACTG
 CTGTCTTATAAGTCTCCAGCTTCAACAGCCAATGGCTCCCATATGCCAGTTCTTTCATGTCC
 ACCAAAGTACCGCTCTCAGCAATTAACAGCCAGGCTCTCAGAGTTCTCTGGGTGTGCTTGG
 CCGGAAGCGAGGTAAAGTANAGGATCGTCTCTGCTCCACAGTTCTCGATCAGGGTACGAG
 GAATGACCTTAGCGGCTGGGCAAGAGCCCTGTATGCACTGCCCCGGGCGGGCTCGCTC
 GA

16512.2.edit

TCGAGCGCCCCGCCCCGAGGTCTCAGCATCAGGAGCCCCGCTTCCCGGCTCTGGTCTATCCCC
 TTGTACCTGATCCAGAACTGTGGGACAGGACCATCCGTCTACTTACCTCCCTTGGGGCC
 AAGCACACCCAGGAGAACTGTGAGACCTGGGCTGTAAATGGNGAGACCGGCTACTTTGGTG
 GACATGAAGGAAGTGGCCATATGGGACCCATGGCTGNGAAGCTGGANACTTATAAGACA
 GCAGTGGAGAGGGCAGTTCTGCTACTGCAATTGATGACATCGTTTCAGGCCACAAAAAG
 AAAGGCCGATGACCANAGCGGCAAGCGGCGGCTTCTCTGATGCTGACCTCGCCCCGGGAC
 CACGCTT

FIG. 13VV

16514.1.edlt

AGCGTGGTCCCGGCCGAGGTCCACTAGAGGTCTGTGTGCCATTGCCCAGGCAGAGTCTCTG
CGTTACAAAGTCCTAGGAGGGCTTGGCTGTGGGAGGGCCTGCTATGGTGTGCTGGCGTTCA
TCATGGAGAGTCCGGCCAAAGGCTCCGAGGTTGTGTGTCTGGGAAACTCCGAGGACAGA
GGGCTAAATCCATGAAGTTTGTGGATGGCCTGATGATCCACAGCCGAGACCCCTTTAACTA
CTACGTTGACACTGCTGTGCCCCAGCTTTGCTCANACAGGGTGTGCTGGGCATCAAGGTG
AAGATCATGCTGCCCTGGGACCCANCTGGCAAAAAATGGCCCTTAAAAACCCCTTCCCTG
ACCACGTGAACCAATTTGTGNGAACCCCAAGATGAANATACTTCCCACCACCCGCCATTG

16514.2.edlt

TGAGCGGGCGCCCGGGCAGGTCTGCCAAGGAGACCCGTATTATGCTGTGGGCACTGGCTG
GGGCATGGCAGGCGGCTCTGGCTTCCACCCCTTCTGTTCTGAGATGGGGTGTGTGGCAGT
ATCTCATCTTTGGGTTCCACAA TGCTCAGCTGGTCAGGCAGGGGCTTCTTAGGCCCAATCT
TACCACTTGGGTCCGAGGGCAGCATGATCTTACCTTGATGCCCAGCACACCCCTGTCTGAG
CAACACCTGGCGCACAGCAGTGTCAACGTAGTAGTTAACAGGGTCTCCGCTGTGGATCAT
CAGGCCATCCACAAACTTCATGGAATAGCCCTCTGTCTCTGGAGTTTCCC.AAAACACCAC
AACCTGCCCAGGCTTTGGGCCCCACTCTCTCATGAATGAACCCGAGCACACCAATTANCAA
GGCCCTTCCGACACAGONAAAGCCCTTCTTAAGGAGTTTGTAAACCGAA.AAAACTCTTCCCT
GGGGCAAAATGGGCACACAGACCTNTANTNGGACCTTGGNCCCGCAACCACCCCTT

16513.1.edlt

ACCGTGGTCCCGGCCGAGGTCTGGCCCTCTTGGCAAGGCTGCTGAAGATGGTCAACCTCG
AAAACTCGAGGACCTCTGTCAGAGAGGAGTGTGTGACACAGGCTGCTGCTGCTTTCCC
TGGAACTCCTGAGCTTCTGCTCTCAAAAGGCAATTAGGGGACACAAATGCTCTGATGATTO
AAGGGACAGCCCGGCTCTGCTGTGAAGGGTGAACCTGGNCCCGCTGCTGAAAATGGA
ACTCCAGCTCAAAACAGGAGCCGCGGCTTCTGCGNAGACAGGACCTGTTGGTGGCCCT
GGCCCANACCTGCCCTGGCCCGGCTCTNAAAAGCGGAAATCCAGNACACTGGCGGCGGNT
ACTANTGGAATCCGAACCTTGGCTACCAAAAGCTTGGCCGTATGATGCCCATAGCTTGTTC
CTGGGCGGAAATTCCTATCCCTCTNCAAATTCGACACAAATACCGAAACCCGAA.AGCA
TTAAAGTCAAAAGCTTGGGCGGCGCTTAATGANGTCAACNTAACTGNCATTTAATTGG
CGTTCCGCTTCACTGCGCGGCTTTCCAGTCCCGGA

16513.2.edlt

TGAGCGGGCGCCCGGGCAGGTCTGGCCGAGGGCCACCAACAGCTCTCTCTCACCAGGA
AGCCACCGGCTCTGTTTGAAGTGGAGTTCCATTTTACCAAGGGGACCAAGTTTACCTT
TCACACCAAGGACCGGGCTGTCTCTCAATCCATCCAGACCATTTGTCCTCAATGCC
TTTGAAGCCAGGAGTCCAGGAGTTCCAGGGA.AACCACGAGCAGCTGTGCTCCAAACAAC
TCTCTCTCACCAGGTGCTGGGCTTTTCCAGGGTGACCATCTTACCAAGCCTTGGCAGGA
GGGCCAGACCTGCGCTCCGACCAAGCT

FIG. 15WW

16516.1.edit

ANCGTGGTCGCGGCGGAGGTCTCTCACCAGAGGTGNCACCTACAACATCATAGTGGAGGCA
CTGAAAGACEANCAGAGGCATAGGTTCCGGGAAGAGG

16516.2.edit

TCGAGCGCGCGCGCGGCGGAGGTCCAATTTCTCCCTGACGGTCCCACTTCTCTCCAATCTTGT
AGTTCACACCAATTGTCAATGGCACCATCTAGATGAATCACAATCTGAAATGACCACTTCCAAA
GCCTAAGCACTGGCACAACAGTTTAAAGCCTGATTCAGACATTCCTTCCCACTCATCTCCA
ACGGCATAATGGGAAACTGTGTAGGGGTCAAAGCAGGATCATCCGTAGGTTGGTTCAAG
CCTTCGTTGACAGAGTTGTCCACGGTAACAACCTTTCCCGAACETTATGCCCTCTGCTGGTC
TTTCAGTGCCTCCACTATGATGTTGTAGGTGGCAGCTCTGGTGAGGACCTGNGNCCNGAAC
AACGCTTAAGCCCGNATTCGCAAGATAATCCCATCACACTTGGCGGCGCGCTTCGANCATG
CATNTAAAGGGGCGCCCAATTTCCCGCTTATAAGNGAANCCGTATTINCCAATTTCACTG
GNCCCGCGGNTTTTACAAACGNCGGTGAAGTGGGGAAGAACCTTGGCGTTACCCAACTT
TAATCGCCCTTGGCAGGACAATCCCCCTTTTCGNCNANTGGGCGTAAATAACCGAAAA

16517.1.edit

ANCGNCGTCGCGGCGCGAANGTNTTTTCTNTTTTTT

16518.1.edit

ACCGTGGTGGCGCGCGGAGGTCTCAGCTTACATCGGTGGTGGTGGACGTGAGCCACGAAGA
CCCTCAGGTCAAGTCAACTCGTACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAA
GCGCGCGGAGGAGGAGTACAAACAGCACTACCGCGGCGGTCAAGCTCTCAGCGTCTCTCCA
CCAGAAATGCTTGAATGGCAAGGAGTACAAGNOCAGGTTTCCAACAAAGCCNTCCCAAG
CCGNTCGAAAAAACCAATTTCCAAAGCCAAAGGGCAGCGCGGAGAAACCAAGGTGTACAC
CCTGCCCCCATGCGCGGAGGAAAGCANCANNAACGNGGTTTCAAGCTTAACTTGGTGGTC
NAANGCTTTTATCCCAAGCACTTCCCCGNTGCAANTCGGAAAAACCAATGGGCGAANC
CGAAAAACAATTACAANAACCC

16518.2.edit

TCGATCGCGCGCGCGCGGAGGTGTGCGAAGTCCAGCAAGGAGGCGTGGTCTTGTAGTTGT
TCTCCGCGTGGCCATTCCTCTGCCACTCCACGGGATGTCCTGGGATAGAAAGCCTTTGAC
CAGGCAGGTCAAGGTGACCTGGTTCTTCTCTCTCTCCCGGATGGGCGCAGGCTGAA
CACCTGGGTTCTCGCGCGCTTGGCTTTGGTTTGAANATGGTTTCTCGATGGGCGCTGG
AAGGGCTTTGTTGNAACCTTGCAGTGAAGTCTTGGCAATCACCCAGNCTGGNCCAGGA
CGGNGAGGAGNCTNACCACAGCGAACCAGGCGCTGGTGGACTCTCC

FIG. 15XX

16519.1.edi:

AGCGTGGTCGGGACGANGTCCTGTGAGAGTGGNACTGGTACAAGTTCCANGAACCCCTGA
 ACTGTAAAGGOTTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGNGN
 CCTGGAAATGGGGCCCATGANAATGGTTGCC

16519.2.edi:

TCGAGCGGGCCCCCGGGCAGGTCCACCACACCCCAATTCCTTGCTGTATCATGGCAGCCGC
 CAGGTGCCAGGATTACGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCAGAGA
 AGTGGTCCCTCGGCCCCCGCCCTGGTGTACAGAGGCTACTATTACTGGCTGGAAACCGGGA
 ACCGAATATACAATTTATGTCAITGGCCCTGAAGAATAATCAGAAGAGCGAGCCCTGATTG
 GAAGGAAAAAGACAGACGAGCTTCCCAACTGGTAACCTTCCACACCCCAATCTTCATG
 GACCAGAGATCTTGGATGTTCTTCCACAGTTCAAAAGACCCCTTTCGGCACCCCCCTGG
 GTATGAACCTGGGAAAAANGONANTTAANCITTCCTGGCA

16520.1.edi:

AGCSTGGTGGCCCCCGAGGTCTGGCAATGCTCTCTGTGTACAGTGAGATATTACAGGATC
 ACTTACGGAGAAACAGGAGGAATATGCGCTGTCCAGGAGTTCACTGTGCTGGGAGCAAG
 TCTACAGCTACCATCAGGCCCCCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTG
 TCACTGGCCGTGGAGACAGCCCCGCAAGCAGCAAGCCAAATTTCCATTAAATTACCGAACA
 AAATTGACAAACCATCCAGATGCAAGTGAACCGATGTTCAAGGACAAACAGCAATTAGTGTCA
 AGTGGCTGCCCTTCAAGGTNCCCTGTGTACTGGCTTACAGANTAAACACCACTCCCAAAAATG
 GACCAGGAAGCACAATAAATTTAACTCCAGGGTCCAGATCAAAACAGAAATGACTATTGA
 ANGCTTGCACCCATACCTGGGAGTATGCGGTAGTGTCTATGCTTCAGAAATCCAAAGCGGA
 AAAANGTCAACCTTNTGGCTTCAA

16520.2.edi:

TCGAGCGCCCCCGCCCCGAGGTCTGAGGTCTGAGTGTCTTCTTCAACCATCAGGTGCA
 GGGAAATAGCTCATGCAATTCATCTCTAGGCTTCGAGTACCTCAGCTGTACCTGGAAACTT
 GCGCTGTGCGCTTTCCCAAGCAATTTGATGGAAATCGACATCCACATCAGTGAATGCCAG
 TCTTTAGGGGATCAATGTTGCTTACTGCAAGNETGAACCAAGAGGTGACTCTCTCCCTT
 GGATTCGAGCATAGACATAACACATACTCCACTGTGGGCTGCAANGCTTCAATAANNC
 ATTTCTGTTTGATCTGGACC

16521.2.edi:

TCGAGCGCCCCCGCCCCGAGGTCTGAGGTCTGAGGTCTGAGTGTCTTCTTCAACCATCAGGTGCA
 CTNATCCAGCTGCCCCAGCCCCCATTTGGCTGAGTTGAGAAAGGTGTGCAAGCAATGACAAACA
 NACCTTGACTCTTCTGCACTTCTTTGGCAAGTGTGACCTTGGAGGGCACCAGAAAG
 GGGCACAAGCTCCACCTGGACTACATCGGCGCTTGCAAAATACATCCCTCCCTTGGCTGGACT
 CTGAGCTGACCGAATTCCTCCCTTGGCGATGCGGACTGCTCAAGAAACCGTCTGCGACCC
 TTGTATCANAGCGATGAACACACNACCC

FIG. 15YY

16522.1.edit

AGCGTGGTGGGGGGGAGGTCTGTCTACAGTCTCAGGACTCTACTCCCTCAGCAGCGTG
 GTGACCGTGCCCTCCAGCAACTTCGGGACCCAGACCTACACCTGCAACGTAGATCACAAGC
 CCAGCAACACCAAGGTGGACAAGAGAGTTGAGCCCAATCTTGTGACAAAATCTCACACAT
 GCCCACCGTGCCCGAGCACTGAACTCCTGGGGGGGACCOTCAGTCTTCTCTTCCCCCGCAT
 CCCCCTTCCAAACCTGCCCCGGGGGGGGCGCTCGAAAGCCGAATTCCAGCACACTGGCGGGCG
 GTACTAGTGGANCCNAACTTGGNANCCAACTGGNGGAANTAAATGGGCATAANCTGTTTC
 TGGGGGGAAATTGGTATCCNGTTTACAATCCCNACAAACATACGAGCCGGGAAGCATAAA
 AGNGTAAAAGCCTGGGGGGNGCCCTANTGAAGTGAAGCTAAACTCACATTAATTNGCGTTG
 CCGCTCACTGGCCCCGCTTTTCAGC

16522.2.edit

TCGAGCGGGGGGGGGGGGAGGTTTGGAAAGGGGGATGCGGGGGGAAGAGGAAGACTGACGG
 TCCCCCAGGAAGTTCAGGTGCTGGGCACGGTGGGCAATGTGTGAGTTTGTGACAAAGATTG
 GGCTCAACTCTCTTGTCCACCTTGGTGTCTCTGGCTTGTGATCTACCTTCAGGTGTAGGT
 CTGGNGCCGGAAGTTGCTGGAGGGGACGGTCACCACCTGCTGAGGGAGTAGAGTCTGA
 GGACTGTANACAGACCTCGGGCGNACCACCTAAGCCGAATTCTGCAGATATCCATCA
 CACTGGCGGGGGCTCCGAGCAATGCATTTAGAGG

16523.1.edit

AGCGTGGNCOCGGACGANCACAACAACCC

16523.2.edit

TCGAGCGGGGGGGGGGGGAGGNCACATCGGCAGCGTCCGAGCCCTGGCCGGCCATCTCG
 AACTGGAATECATCGGTCACTCTTGGGGAACCAAGACATGCCCTTTGTCTTGGGGTTCTT
 GCTGATONACCAGTTCTTCTGGGCCACACTGGGCTGAGTGGGGTACACCGAAGGTCTCAGCA
 GTCTCCATGTTGCAGAAAGACTTTGATGCCATCCAGGTTCCAGCCTTGGTTGGGGTCAATCC
 AGTACTCTCCACTCTTCCAGTCAGAGTGGGACATCTTGAGGTACGGCAAGGTGGGGGGGG
 GTTCTTCACT

16524.1.edit

AGCGTGGTGGGGGGGAGGTCCACCCCTCGAGATAANGGTGAAGGTGGTGGCCCCGGACTT
 CCAGGTATAGCTCGACCTCGTGGTAGCCCTGGTGAAGAGAGGTGAAACTGGCCCTCCAGGA
 CCTGCTGGTTTCCCTGOTCTCTCTCCACABAATGGTGAACCTGGNGGTAAAGGAGAAAGA
 GGGGCTCCCGNTGANAAGGTGAAGGAGCCCTCTGNAATTGGCAGGGGGCCCCANGACTT
 AGAGGTGGAGCTGGCCCCCTGGCCCGGAAGGAGCAAGGCTGCTGCTGCTCTCTCTGGG
 CCACCTGG

FIG. 15ZZ

16324.2.edit

TCGAGCGGGCCCCCGGCGAGGTCTGGGCCAGGAGGACCAATAGGACCACTAGGACCCCTT
 GGGCCAICTTTCCTGGGACACCATCAGCACCTGGACCGCCTGGTTCACCCCTTGTACCCCTT
 TGGACCAGGACTTCCAAGACCTCCTCTTTCTCCAGGCATTCTTGCAGACCAGGAGTACCA
 NCAACACAGGTGGCCCCAGGAGGACCAAGCAGCACCCCTTCTCTCTCGGGACCAAGGGGA
 CCAGCTCCACCTCTATAAGTCTCTGGCGCCCTGCCAATCCAGGAGGGCCTCCTTCACCTTTCTC
 ACCCGGAGCCCCCTCTTTCT

16326.1.edit

TCGAGCGGGCCCCCGGCGAGGTCCACCGGATATTGGGGGTCTGGCAGGAATGGGAGGC
 ATCCAGAACGAGAAGGAGACCATGCCAAAGCCTGAACGACCCCTGGCCTCTTACCTGGAC
 AGAGTGAGGAGCCTGGAGACCGACAACCGGAGCCTGGAGAGCAAAATCCGGGAGCACTT
 GGAGAAGAAGGACCCAGGTCAAGAGACTGGAGCCATTACTTCAAGATCATCGAGGACCT
 GAGGGCTCANATCTTCGCAATACTCGCAGCAATGCCCG

16326.2.edit

ATGCGNGGTGGCGGCGGANGACCAACTCTGGCTCATCTTGACTCTAAAGNCTCACCAG
 NANTTACCGNCAATGCCAACTGCGACAACGATGCCGGCATTGTCCGCANTAATTGCCGAAG
 ATCTGACCCCTCAGGNCCTCGATGATCTTGAAGTAANGGCTCCAGTCTCTGACCTGGGGTC
 CCTTCTTCTCCAAGTCTCTCCCGAATTTGCTCTCCACCCCTCCGTTCTGGGTCTCCAAGNCT
 TCTCACTCTGTCCAGGAAGAAGACCCAGCGCGNCGATCAGGGCTTTTGCATGGACT

16327.1.edit

AGCGTGCTCGCGCCCCAGGTTGTACACCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTT
 TTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTT

16327.2.edit

TCGAGCGGGCCCCCGGCGAGGTCTGCCAAGACCAAGATTGGCCCCCGCGCATCCACACA
 GTTNGTGTGGGGGAGGTAAACAAGAAATACCGTCCCTGAGGNTGGACGNGGCGAATTTT
 TCCTGGGGCTCAGAGTGTGTACTCGTAAACAAGGATCATCGATGTTGTCTACAAATOCAT
 CTAATAACGAGCTGTTCGTACCAAGACCTGGTGAAGCAATTCATCGTGTCTCATNGACA
 GCACACCGTAACCAACAGTGGGTACCGAAGTCCCACTATGCNCT

FIG. 15.AAA

16539.1.edit

TCGAGCGGCGCGCGCGCGCGAGGTCCACGACACCCAAATTCCTTGCTGGTATCATGGCAGCCGC
 CACGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCTCTCCAGAGA
 AGTGGTCCCTCGGCGCGCGCGGTGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGA
 ACCGAATATACAAATTTATGTCAATGCCCTGAAG

16539.2.edit

AGCGTGNTCNCGGCGCGAGGATGGGGAAGCTCGNCTGTCTTTTTCTTCCAATCAGGGGCTN
 NNCTTCTGATTATTCTTCAGGGCAANGACATAAAATGTATATTGGNTCCCGGTTCCAGN
 CCAATAATAGTAGCCTCTGTGACACCAAGGCGCGCGCGAGGGACCACTTCTCTGGGAGGA
 GACCCAGGCTTCTCATACTTGATGATGAAGCCGGTAACTCTGGCACGTGGCGCGGTGCCAT
 GATACCACCAANGAATTGGGTGTGGTGGACCTGCCCCGGCGCGCGCTCGAAAAACCGAA
 TTCTGTCAAGAAATATCCATCACACTTGGGCGCGCGCGTTCGAACCATGCATENTAAAAGGG
 CCGCAATTTCCCCCTATTAGGNGAAGCCNCATTTAACAAATTCCACTTGG

16539.1.edit

TCGAGCGGCGCGCGCGCGCGAGGTCTCGGCGTGGCACTGGTGATGCTGCTGCTGTGGTCCCC
 CCGGCGCTCTTGACCTCTGTCTCGGCTGGTCTCGGCGGCTGGTTTCGACTTCAGCTTC
 CTGCCCCAGCCACCTCAAGAGAAGGCTCAGGATGGTGGCGGCTACTACCGGGCTGATGAT
 GCCAATGTGGTCTGTGACCGTGAAGCTGGAGGTGGACACCACTCAAGAGCCCTTGAGCCA
 GCAGAAATGAAAAACATTCGGAACCCAGGAAGGCGAAGCCCGCAAAAGAAACCGCGCGCG
 ACCTGGCGCGCAACCTCAAGAAAGTGGCGCACNTTTGACTGGGAAAAAAAGGGGAAANT
 ACTTGGAAATGGAC

16539.2.edit

AGCGTGCTCGGCGCGCGAGGTCCACATCGGCAAGGTGGGAGCCCTGGCGCGCATACTCGAA
 CTGGAATCCAATGGTCAATGCTCTCGGCGAACCAGACATGCTCTTGTCTCTGGGCTTCTTGC
 TGAATGATACCAATCTCTCTGGCGCACCTCGGCTGAGTGGGTACAGCCAGGTCTCAGCAGT
 CTCCATGTTGAGAAACACTTTCATGGCATCCAGGTTCCAGCCTTGGTTGGGCTCAATCCAG
 TACTCTCCACTCTTCCACTCAGAAAGTGGCACATCTTGAAGGTCAAGCCAGGTTGGCGCGGG
 GTTCTTGGCGGCTGCCCTCTGCGCTCGGCGAATGTTCTNNGAACTTCTGG

FIG. 15BBB

16530.1.edi

AGCGTGCTCCGGCCGAGGTCCACTAGAGGTCTGTGTGCCATTGCCAGGCAGAGTCTCTG
CGTTACAAACTCCTAGGAGGGCTTGCTGTGCCGAGGGCCTGCTATGGTGCTGCGGTTCA
TCATGGAGAGTGGGCCCCAAAGGCTGCGAGGTTGTGGTGTCTGGGAACTCCGAGGACAGA
GGGCTAAATCCATGAAGTTTGTGGATGGCCTGATGATCCACAGCGGAGACCCCTGTTAACTA
CTACGTTGACACTTGCTTGTCGCCACGTGTGCTCANACANGGGGTGGGCTGGGCATCAAG
GNG

16530.2.edi

TCGACCGGGCCGGCCGGGACAGGTCTGCCAAGGAGACCCCTGTTATGCTGTGGGACTGGCTG
GGGCATGGCAGGGCGGCTCTGGCTTCCCACCCCTTCTGTTCTGAGATGGGGGTGGTGGGCAGT
ATCTCATTTTGGGTTCCACATGCTCACGTGCTCAGGCAGGGGCTTCTTAGGGCCAATCT
TACCAGTTGGTCCGAGGGAGCATGATCTTCACTTGATCCCCAGCACACCCCTGTCTGAG
CAACACGTGGCGCACAGCAAGTGTCAACGTAACTAAGTTAACAGGGTCTCCGCTGTGGAT
CATCAGGCCATCCACAACTTCATGGATTAACCCCTCTGTCTCGGAG

16531.1.edi

TCGAACGGCCCGCCCGGACAGGTCTTCAGACCTTCCAAGGTCCACTGTGGAGGTCCCAGG
AGTCTGGTGGTGGCCACAGAGTCCGATGGGTGAAACCATGACATAGAGACTGTTCT
GTCCAGGGTGTAGGGCCCCAGCTCTTGATGCCATTGCCAGTTGGCTCAGCTCCCACTAC
AGCCGCTCTCTGTGAGTCCAGGGCTTTTCGGTCAAGATGATGGATGCAGATGGCATCCA
CTCCAGTCCGCTCTCCATCTTCTGGGAGCTGAGAGAGGTCACTGTCCAGCCAGAGTACAG
AGGGCCACACCTGCTGTCTCTTGAATA

16531.2.edi

AGCGTGCTCCGGCCGAGGTCTGTACTCCGAGCTAAACAAAGTGACCAATGACATTOAAG
AGCTGGGCCCCCTACACCCCTGGACAGGAACAGTCTCTATGTCAATGGTTTCACCCATCAGAG
CTCTGTGONCCACCACCAAGCTCTCTGGACCTCCACAGTGGATTTGAGAACCTCAGGGACT
CCATCTCTGCTCTCCAGCCCCACAAATATGGCTGCTGGGCTCTCTGTGTACCAATTCACCT
CAACTTCACCATCACCACCTGGAGTATGGGAGGACATGGGTCAACCTGNETCCAGGA
GTTCAACACCA

16532.1.edi

TCGACCGGGCCCGGACAGGTCTGGGCGGATAGCACCGGGCATAATTTGGAAATGGATGA
GGTCTGGCACCTTGAGCAGTCCAGGACCACTTGGTCTTAATTGAGCAATTTGGCTAGGAG
GATAGTATGACAGCAGGNETCTGAGNETCTGGGATAGCTGCCATGAAGTAACCTGAAGGAG
GTGCTGGCTGOTANGOOTTGATACAGGCTTGGGAACAGCTCGTACACTTGGCAATCTCTG
CATATACTGGTAGTGAGGTGAGCCTGGCCCTCTCTTTG

FIG. 15CCC

01_16328.3.edit

AGCGTGGTCCGCGCCGAGGTGAGCCACAGGTGACCGGGCTGAAGCTGGGGCTGCTGGNC
CTGCTGGTCTG

02_16328.1.edit

CAGCNGCTCCNACGGGGCCTGNGGGACCAACAACACCTTTTCACCCCTTAGGGCCTTTGGC
TCTCTTTTCTCCTTTAGCACCAGGTTGACCAGCAGCNCANAGGACCAGCAAATTCATTG
GGCCAGCAGGACCGACCTCACCACGTTTACCAGGCTTCCCCGAGGACCAGCAGGACCA
GCAGGACCAGCAGCCCCAGCTTCCGCCCGGTACCTGTGGCTCACCTCGGGCCGCGACCAGC
CT

03_16335.1.edit

TCGAGCGGTCCGCCCGGGCAGGTCCACCGGGATACCGGGGCTGTGGCAGGAATGGGAGGC
ATCCAGAAACGAGAAGGAGACCATCCAAAGCCTGAACGACCGCCTGGCCTTTACCTGGAC
AGAGTCAGGAGCCTGGAGACCGAANAACCGAGGCTGGANAGCAAAATCCCGGAGCACTT
GGAGAAAGAGGGACCCACGCTCAAGAGACTGGAGCCATTACTTCAAGATCATCGAGGGA
CCTGGAGG

04_16335.3.edit

AGCGNGTCCCGCCCGAGGTCCAGGTCTCTCTCACTTCACTCTAAAGTCATCACCAGCA
AGACGGGCATTGTCAATCTGCAGAACCATCGCGGCATTCTCCGCACTATTTCGGAAGATCT
GAGCCCTCAGGTCTCTGATGATCTTGAAGTAATGGCTCCAGTCTCTGACCTGGGGTCCCTT
CTCTCCAAAGTCTCTCCCGCATTTCTCTCTCAACCTCCGCTTCTCGGTCTCCAGGCTCTCA
CTCTGTCCAGGTAAAGAGGCCCAAGGCTCTCTTCAAGCTTTCATGGTCTCTCTCTCTCT
GGATGCCCTCCCATTCCTGCCAGACCC

05_16336.1.edit

TCGAGCGGCGCGCCCGGGCAGGTCAAGCAAGCAATTGGTCTTAGAGCCACTGCCCTCCTGGA
TCCACCTGTGCTGCGGACATCTCCAGGAGTGCAGCAAGGGAAGCAGGTCAAATCTGCTCA
GATCAGTCAGACTGCTGTCTCTCACTTCTCACTTGAGCAAGGTCACTCTGCAGCCAGAGTA
CAGAGGGCCAAACACTGGTGTCTTGAACAAGCGCTTGAGCAGACCTTCCAGAACCTCTTC
CGTGGTCTTCAACTTCTCTGAAACCAAGGCTGTTCATGTCTTTTCTCTCATAATGCAAGGTTG
GTGATCG

FIG. 15DDD

07_16337.1.edit

AGCGTGGTCCGGCCGAGGTCCACATCGGCAGGGTCCGAGCCCTGCCC GCCATACTCGAA
CTGGAATCCATCGGTCAATGCTCTCGCCGAACAGACATGCCTCTTGTCTTGGGGTTCTTGC
TGATGTACCAAGTCTTCTCGGGCCACACTGGGCTGAGTGGGGTACACCGCAGGTCTCACCAG
TCTCCATGTTGCAGAAGACTTTGATGGCATCCAGGTTGCAGCCTTGTTGGGGTCAATCCA
GTACTCTCCACTCTTCCAGTCAGAAGTGGGCACATCTTGAGGTCACCGCCAGGTGCCGGGC
CGGGGGTTCTTGGGCTTGCCCTCTCGGGCTCCGGATGTTCTCGATCTGCTTGGGTCAGGCTC
TTGAGGGTGGGTGTCCACCTCGAGGTCACGGTCAACGAAACCTGCCCGGGCCGCCCGCTC
CA

08_16337.2.edit

TGGAGCGGTCCCGGGGAGGTTTCTGTGACCGTGACCTCGAGGTGGACACCACCCTCAAG
ACCCTGAGCCAGCAGATCGAGAACAATCCGGAGCCCAGAGGGCCAGCCGCAAGAACCCCGC
CCGCACCTGCCGTGACCTCAAGATGTGCCACTTGACTGGAAGAGTGGAGAGTACTGGAT
TGACCECAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGGT
GAGACCTGCGTGTACCCCACTCAGCCCACTGTGTGGGGCCAGAAGAACTGGTACATCAGCA
AGGAACCCCAAGGACAAGAGGCAATGCTCTGGTTCCGGCGAGNAGCATGACCCGATGGATT
CCAGTTTTCGAGTATTGGCCGGCCAGGGCTTCCCGACCCTTGCCGATGTGGACCTCGGGCCCG
ACCACCGCT

FIG. 15EE

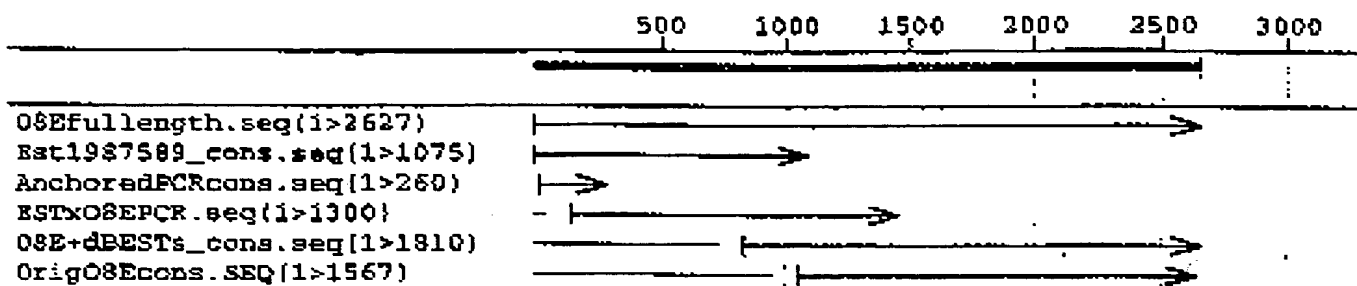


Fig. 1b

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33/68, C07K 16/18

(74) Agents: MAKI, David, J. et al.; Seed and Berry LLP, Suite
6300, 701 Fifth Avenue, Seattle, WA 98104-7092 (US).

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IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,
LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,
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MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GW, ML, MR, NE, SN, TD, TG).

(71) Applicant: CORIXA CORPORATION [US/US]; Suite
200, 1124 Columbia Street, Seattle, WA 98104 (US).

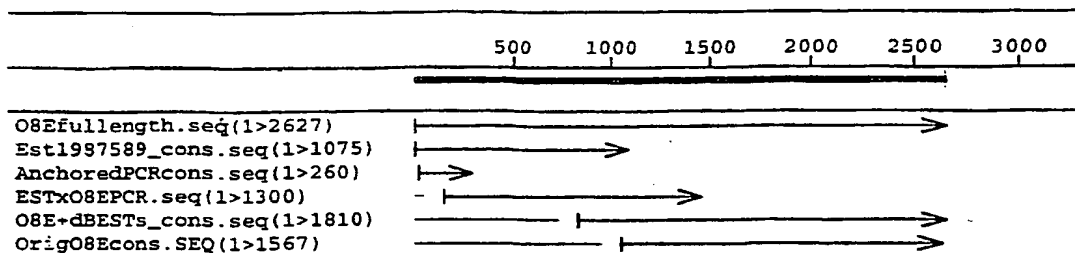
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(72) Inventors: MITCHAM, Jennifer, L.; 16677 Northeast
88th Street, Redmond, WA 98052 (US). KING, Gordon,
E.; 1530 NW 52nd, #304, Seattle, WA 98107 (US). AL-
GATE, Paul, A.; 2010 Franklin Avenue E., #301, Seattle,
WA 98102 (US). FRUDAKIS, Tony, N.; 7937 Broadmoor
Pines Boulevard, Sarasoto, FL 34243 (US).

(88) Date of publication of the international search report:
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For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: COMPOSITIONS AND METHODS FOR THERAPY AND DIAGNOSIS OF OVARIAN CANCER



(57) Abstract: Compositions and methods for the therapy and diagnosis of cancer, such as ovarian cancer, are disclosed. Compositions may comprise one or more ovarian carcinoma proteins, immunogenic portions thereof, polynucleotides that encode such portions or antibodies or immune system cells specific for such proteins. Such compositions may be used, for example, for the prevention and treatment of diseases such as ovarian cancer. Methods are further provided for identifying tumor antigens that are secreted from ovarian carcinomas and/or other tumors. Polypeptides and polynucleotides as provided herein may further be used for the diagnosis and monitoring of ovarian cancer.

WO 00/36107 A3

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/30270

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/12 C07K14/47 C12N15/62 C12N15/11 C12Q1/68
G01N33/68 C07K16/18

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C07K C12Q G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	K. ISHIKAWA ET AL.: "Prediction of the coding sequences of unidentified human genes. The complete sequences of 100 new cDNA clones from brain which can code for large proteins in vitro." DNA RES., vol. 5, 1998, pages 169-176, XP002121149 the whole document --- -/--	3,4,6

☒ Further documents are listed in the continuation of box C.☐ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
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- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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- *&* document member of the same patent family

Date of the actual completion of the international search

15 May 2000

Date of mailing of the international search report

17. 08. 2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Hix, R

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 99/30270

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>MA J ET AL: "USE OF ENCAPSULATED SINGLE CHAIN ANTIBODIES FOR INDUCTION OF ANTI-IDIOTYPIC HUMORAL AND CELLULAR IMMUNE RESPONSES" JOURNAL OF PHARMACEUTICAL SCIENCES,US,AMERICAN PHARMACEUTICAL ASSOCIATION. WASHINGTON, vol. 87, no. 11, November 1998 (1998-11), pages 1375-1378, XP000877492 ISSN: 0022-3549 the whole document</p> <p>---</p>	
A	<p>GILLESPIE A M ET AL: "MAGE, BAGE AND GAGE: TUMOUR ANTIGEN EXPRESSION IN BENIGN AND MALIGNANT OVARIAN TISSUE" BRITISH JOURNAL OF CANCER,GB,LONDON, vol. 78, no. 6, September 1998 (1998-09), pages 816-821, XP000892404 ISSN: 0007-0920 the whole document</p> <p>---</p>	
A	<p>PEOPLES G E ET AL: "OVARIAN CANCER-ASSOCIATED LYMPHOCYTE RECOGNITION OF FOLATE BINDING PROTEIN PEPTIDES" ANNALS OF SURGICAL ONCOLOGY,US,RAVEN PRESS, NEW YORK, NY, vol. 5, no. 8, December 1998 (1998-12), pages 743-750, XP000892412 ISSN: 1068-9265 the whole document</p> <p>---</p>	
A	<p>BOOKMAN M A: "BIOLOGICAL THERAPY OF OVARIAN CANCER: CURRENT DIRECTIONS" SEMINARS IN ONCOLOGY,US,BETHESDA, MD, vol. 25, no. 3, June 1998 (1998-06), pages 381-396, XP000892403 the whole document</p> <p>---</p>	
A	<p>KOEHLER S ET AL: "IMMUNOTHERAPIE DES OVARIALKARZINOMS MIT DEM MONOKLONALEN ANTI-IDIOTYPISCHEN ANTIKOERPER ACA125 - ERGEBNISSE DER PHASE-LB-STUDIE. IMMUNOTHERAPY OF OVERIAN CARCINOMA WITH THE MONOCLONAL ANTI-IDIOTYPE ANTIBODY ACA125 - RESULTS OF THE PHASE LB STUDY" GEBURTSHILFE UND FRAUENHEILKUNDE,XX,XX, vol. 58, no. 4, April 1998 (1998-04), pages 180-186, XP000892407 ISSN: 0016-5751 the whole document</p> <p>-----</p>	

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 99/30270

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 18 to 20, 27, 28, 35 to 41, 46 to 48 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-68 (partially)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

1. Claims: 1-68 {partially}

An isolated polypeptide comprising at least an immunogenic portion of an ovarian carcinoma protein and encoded by SEQ ID NO:1, expression vectors comprising said polynucleotide, host cells transformed by said vector, pharmaceutical compositions and vaccines comprising the polypeptide encoded by said polynucleotide according to claims 9 to 17, 23 to 25 and 29 to 34, and methods of using said polynucleotides for the treatment and/or diagnosis of ovarian cancer and diagnostic kits comprising said polynucleotide.

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